TEAM PERFORMANCE: USING FINANCIAL MEASURES TO EVALUATE THE INFLUENCE OF SUPPORT SYSTEMS ON TEAM PERFORMANCE

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Organizations invest in team-based systems in order to generate innovative practices that will give them a competitive edge. High-performing teams require training and other support systems to gain the skills they need as well as to create and maintain an environment conducive to their success. The challenge for managers is to make resource allocation decisions among investment alternatives to maximize team effectiveness and still ensure a financial return for company investors.

This study has three objectives. The first objective is to investigate whether there is a positive relationship among organizational environment, team potency (the team's collective belief it will succeed) and team performance. Results indicate that the presence of four organizational support systems influences team potency and performance. These support systems are the Design and Measurement, Rewards, Training and Communications Systems. In addition, results indicate that team potency is a mediating variable between the Design and Measurement and Communications Systems and team performance. These results suggest that companies are able to influence team performance by investing in environmental support systems.

The second objective is to examine whether team members and managers view the organizational environment differently. Results indicate that managers view the Training and Communications Systems as more important, while teams perceive the Design and Measurement System and the Rewards System to be more important to their

success. Since the systems that team managers view as important may influence their investment decisions, these differences may suggest a resource alignment issue.

Third, a measure of team effectiveness based on financial measures is introduced. Published literature emphasizes attitudinal, behavioral and operational measures of performance. A financial measure offers a method of evaluating performance that is similar to methods used in capital budgeting and may be consistently applied across different types of teams with different purposes. The data collection process was performed by persons external to the team and covered a 12-month period. This method led to a loss of information and did not accurately portray team performance. However, the teams that were successful in calculating project savings were different types of teams from both manufacturing and service industries. This result is encouraging and warrants further investigation.

This work is dedicated to the memory of two very supportive people: to my Mother for her dedication to the educational process and to Supitcha whose goodness of heart will remain with me always.

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CHAPTER 1

INTRODUCTION

Problem Statement and Purpose

Many organizations are investing in team-based systems in order to respond more quickly to their changing environment and tap into the expertise of their employees (Katzenbach and Smith 1993; Wageman 1997;). Making quicker, smarter, more effective decisions enables companies to respond to intense global competition (Dunphy and Bryant 1996). As one product of team working, innovation can result in the ability to produce new and better ways to meet customer demands (Katzenbach and Smith 1993). Organizations that invest in team-based systems are searching for innovative practices that will give them a competitive edge (Katzenbach and Smith 1993; Quinn et al. 1996).

Teams require investment in training and other support systems to gain the skills they need and to create and maintain an environment conducive to their success (Mohrman et al. 1995; Sundstrom et al. 1999). Managers must also understand how support systems, teams and performance relate within a team-based organization (TBO) to effectively manage team performance. A possible model of a TBO[1] is shown in Figure 1 (see Appendix A). This model has much in common with other organizational designs.

[1] This model was developed in partnership with corporate sponsors of the Center for the Study of Work Teams (CSWT) at the University of North Texas. Company representatives volunteered to work together

It shows a company first crafting a strategy by analyzing the industry, market and competitors and by identifying core competencies (Kaplan & Norton 1996). Prahalad and Hamel (1990, 82) described core competencies as the "collective learning of the organization." Companies are recognizing that a key to developing and maintaining competitive advantage is to develop the knowledge, skills and abilities of their employees. The one competitive advantage that cannot be copied easily is people (Heracleous 1995; Prahalad & Hamel 1990; Senge et al. 1994; Stewart 1997; Sveiby 1997).

Many organizations are turning to team structures as one way to share, capture and deploy the intellect and knowledge needed for competitive advantage. Once the decision has been made to establish teams, managers must also invest in the support systems that nurture their ability to perform. An organization that wants its teams to develop into high performance teams (Katzenbach & Smith 1993) must also recognize the need to develop environmental support and provide the resources and direction the teams need to achieve their goals.

Team performance must in some way be measured to determine whether the team is still on track with company strategy. Having an appropriate measurement system in place is imperative when evaluating this question. The final element in the TBO model focuses on whether the team has met its goals and objectives.

If the team has met its goals, then a feedback loop cycles back to the strategy and core competency elements. If the team has not achieved the desired results, an alternate

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on a team dedicated to measuring team effectiveness. This two-year effort resulted in the strategic model

feedback loop returns to the support system element. This step forces management to question whether or not there is sufficient support in place for the teams to perform. The following questions are examples of those that management may pose to determine whether the level of support is adequate or lacking:

1. Are the necessary technical skills available within the team membership?
2. Has the team's mission been clearly communicated? Does the team have a charter?
3. Have all the team members had team skill training, such as how to run meetings, resolve conflict, identify problems, and engage in group decision-making?
4. Do team members have access to all the process information they need for their task?
5. Do the performance measurements that are in place actually measure the expected outcome of the team's project/process?
6. Is there a reward structure in place to motivate team performance? Is there a conflict between the performance measures and the reward structure?
7. Has the supervisor for this team been properly trained as a team facilitator?

By readdressing the area of support systems, managers can identify weaknesses or conflicting systems that may inhibit team performance. Once weaknesses and conflicts are identified, management can then take actions to strengthen their support in these areas and provide the resources the teams need to achieve their goals.

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described in this section.

Prior research suggests that certain team member perceptions may influence their performance (Campion et al. 1993; Guzzo et al. 1993). These perceptions reflect how team members perceive the support provided by the organization (e.g., training, rewards, performance measures). The team's performance may be positively influenced when team members believe they have adequate resources and support to accomplish their goals.

This study focuses on the four highlighted elements of the TBO model: support systems, teams, potency and performance. An understanding of the relationships among these elements will assist managers in their efforts to develop a high-performing team-based organization. The study is divided into two parts. The first part of the study addresses three research questions (RQ) exploring how team members and managers perceive team support systems and the influence of this perception on their perception of team performance.

RQ1. Do team members' perceptions of support vary by type of support, type of team or stage of team development?

RQ2: Is there a relationship between team members' perceptions of support and team potency and performance?

RQ3: Do managers' perceptions of support systems differ from team perceptions?

These three questions are addressed using information acquired through surveys completed by team members and managers. Hypothesis testing is performed using multivariate analysis of variance and multiple regression techniques.

The second part of the study contains two field research questions that focus on measuring the financial performance of teams. Incremental cash flow estimates are used to calculate a financial index to measure team performance, as well as soliciting financial measures currently used by participating companies.

RQ4: Is the financial measure (TEF) correlated with manager and team member perceptions of performance?

RQ5: What financial performance measures are companies using to evaluate teams?

The fourth and fifth research questions are approached as a field study, with information obtained through interviews and surveys completed by team members and team managers. In addition, company representatives compile financial information necessary to examine the fourth research question. These research questions are developed thoroughly in chapter 2.

CHAPTER 2

LITERATURE REVIEW

Research into teams and team-based organizations is found in the strategy literature as well as the organizational behavior and psychology literature. Recent studies addressed issues relating to specific support systems, such as rewards and performance measures (Scott & Tiessen 1999), but there is no research into how accounting measures may be used to guide resource allocation into intangible assets. With the exception of certain studies involving audit teams, the discipline of accounting has yielded few studies involving team-based organizations.

Work teams are becoming an increasingly important factor in organizational and human resource initiatives. Reich (1987, 78) wrote, "If we are to compete in today's world, we must begin to celebrate collective entrepreneurship, endeavors in which the whole of the effort is greater than the sum of individual contributions." This interest in groups is reflected in a 1996 survey of Fortune 1000 companies, which revealed that the use of employee participation teams has increased from 70% in 1987 to 94% in 1996 (Lawler et al. 1998). This trend shows a growing number of companies using teams to manage their daily decisions.

The first section of this chapter summarizes the team literature pertinent to this study, including types of teams, team development, support systems, team potency and

team performance. The second section presents hypotheses and ties them to the literature discussion.

Team Basics

A work group or team "is made up of individuals who see themselves and who are seen by others as a social entity, who are interdependent because of the tasks they perform as members of a group, who are embedded in one or more larger social systems (e.g., community, organization) and who perform tasks that are related others (such as customers or coworkers)" (Guzzo and Dickson 1996 308-309). Katzenbach and Smith (1993) and Mohrman et al. (1995) have developed similar definitions. Common to all the definitions is that the team is a group of individuals interdependent in both task and goals and that it exists within a larger system.

An increasing number of companies are involving teams in their business transformations. Companies often initiate multiple change initiatives in their organizations (e.g., re-engineering, just-in-time manufacturing and material requirements planning [MRP]). Teams are often a part of broader organizational change and have an impact on company performance. A meta-analysis of 131 studies of organizational change conducted by Macy and Izumi (1993) found that initiatives with the largest influences upon financial measures of the organization were those that included the use of teams. Levine and Moreland (1990) concluded that teams effectively enable substantive participation that leads to sustained increases in productivity. This study

examines potential drivers of team performance and how they assist managers in making resource decisions that lead to improved performance.

Types of Teams

Several types of teams emerge in organizations with the type usually dependent on the task of the team. Teams use their unique combination of skills to solve problems, improve processes and make faster, more effective decisions. Several different typologies are used to categorize teams (Katzenbach & Smith 1993; Mohrman et al. 1995, Sundstrom et al. 1990). One persuasive typology is Cohen and Bailey's (1997) four types of teams: work teams, parallel teams, project teams and management teams. Cohen and Bailey's typology differs from the others in that it divides improvement teams into parallel and project teams. This allows teams to be differentiated based on whether the team is ongoing or time-limited. Teams participating in this study are classified consistently across companies using the Cohen and Bailey typology. Each of these categories is discussed below.

Work teams are work units responsible for producing goods or providing services. Examples of work teams include production lines, maintenance, distribution teams and customer satisfaction teams. Membership is usually ongoing and typically from the same function. Work cycles are continuous and repetitive. Traditionally, supervisors guide these teams. Some companies are engaging in self-managing practices that extend responsibilities for administrative duties such as scheduling and training to the teams.

Parallel teams are cross-functional teams used for problem-solving and improvement activities. Examples of parallel teams include scrap reduction teams, inventory accuracy teams and vendor certification teams. Membership is ongoing and is drawn from functions or departments whose work processes overlap. These teams are called parallel because they coexist with the members' home department responsibilities. People from different work units are pulled together to perform functions that the regular organization is ill-equipped to perform. Companies organized by function often use parallel teams to bridge gaps in process knowledge caused by isolated functional responsibilities. Parallel teams allow responsibilities and knowledge to be organized by process. The teams' objectives are to analyze a process and make recommendations to management.

Project teams are cross-functional and are used for problem-solving. Examples of project teams include new product development teams, project implementation teams and task forces. The project teams differ from parallel teams in that they are brought together with a specific goal, and, once the goal is achieved, the team disbands and members return to their functional group. Project teams are time-limited and usually have a mandate of innovation. Their output is highly unpredictable, and members normally have a high level of individual expertise.

Management teams coordinate and provide direction for an organization or unit. This type of team is composed of managers from different functions with decision-making authority. These teams may exist at the executive level, as well as the division or subunit level and are responsible for overall performance at that level.

Stages of Team Development

The length of time that a team works together influences the extent to which the members collaborate to perform productively. Time together is only one measure of development, because teams are composed of individuals who come together with unique differences of personalities and skills.

Katzenbach and Smith (1993) described teams' maturity process as nonlinear. In the beginning, some progress is made even though work norms come from the old work structure. As teams begin to mature and redefine their roles and goals, their output initially declines. Productivity greatly increases in the latter stages of development when new working norms have been established, indicating a shared mental model of purpose. Figure 2, in Appendix A, illustrates the relationship between performance and the five stages of team development (Katzenbach and Smith 1993). Team effectiveness in the horizontal axis is the ability of a team to interact effectively in terms of key team characteristics. The vertical axis is the performance impact, which is the ability to achieve significant results in terms of profit, productivity, quality and customer satisfaction (Peters 1997). Elrod and Tippett (1999) and Peters (1997) empirically validated the performance curve described by Katzenbach and Smith (1993).

Five stages of teams reflect the level of development. These stages include working groups, pseudo-teams, potential teams, real teams and high-performance teams. Elrod and Tippett (1999) examined the relationship between maturity level and performance on 112 teams and found evidence that the stage of maturity does influence

performance. Peters (1997) and Wilkins (1998) found similar evidence. The behavior teams exhibit differs with maturity phases (Convey 1994). Figure 2 lists the major characteristics associated with each stage of maturity (see Appendix A).

Another typology for team development is commonly found in practitioner journals and used in team training sources (Mohrman et al. 1995; Zobal and Wilkins 1998). It divides the stages of development into forming, storming, norming and performing (Tuckman and Jensen, 1977). Katzenbach and Smith's (1993) categories are used in this study due to the empirical validation by Elrod and Tippett (1999).

Support Systems

A decision to invest in a team-based organization should involve more than putting seven or so people in a room and telling them to get started (Katzenbach and Smith 1994; Mohrman et al. 1995). Consideration should be given to team membership and training in team skills. Teams should have a clear understanding of their mission and how their performance contributes to organizational objectives. In addition to these basic factors, teams need access to information about processes and resources. They need performance measures and appropriate rewards to guide and motivate their behavior. Most of all, they need managerial support for their decisions and recommendations. These factors are called support systems (Hall 1998; Sundstrom et al. 1999), climate (Burningham and West 1995) or context (Stevens and Campion 1994). Although referred to by different terms, descriptions of these factors are similar throughout literature.

Burningham and West (1995, 116) summarized their study of climate factors on group performance:

> Taken together, the results suggest that a combination of group encouragement for new ideas, associated with commitment of resources, along with appraisal and monitoring of group processes are of primary importance in predicting group innovation. . . . Overall, despite the emphasis in recent years on the importance of structural and individual level variables in predicting group performance, a group climate would seem from these results to have great value in predicting group level innovativeness.

In summary, organizations that want their teams to develop into high-performance teams (Katzenbach and Smith 1994) must also recognize the need to develop environmental support, providing the resources and direction they need to achieve their goals. A basic premise of this study is that support systems are an integral part of a team-based organization. Studies indicate that insufficient support leads to a majority of team failures (Mohrman et al. 1995; Sundstrom et al. 1999).

Several studies reveal that individual support systems positively influence team performance. These support systems include group design (Campion et al. 1993; Gladstein 1984; Wageman 1997), performance measurement system (Burningham and West 1995; Scott and Tiessen 1999; Shea and Guzzo 1987b), information systems (Cohen et al. 1996; Hackman and Walton 1986; Lawler 1986), management support (Campion et al. 1993; Burningham and West 1995; Wageman 1997), training systems (Campion et al. 1993; Cohen et al. 1996; Lawler, 1986), rewards (Cohen et al. 1996;

Hackman and Walton 1986; Scott and Tiessen 1999) and integration (Sundstrom et al. 1999). A description of the attributes of each support system can be found in Appendix C. Individually, support systems are shown to influence performance. Team members perceive the adequacy of the support systems and incorporate these perceptions into their belief that they can be effective. This concept is discussed in the next section.

Team Potency

Potency "is the collective belief in a group that it can be effective" (Guzzo et al. 1993). Generally, team members evaluate the probability that they will succeed by assessing the abilities of the team members and the support provided by the organization. If team members perceive that they have sufficient ability and support, their belief that they can achieve their goal (potency) is high. This belief decreases if they find that they lack skills or management support. Prior literature supports the premise that the level of a team's potency influences their performance (Campion et al. 1993; Guzzo et al. 1993; Shea and Guzzo 1987b). Potency is used in this study as a mediating variable contributing to team performance. In other words, support systems may not directly influence performance except to the extent that systems influence team potency. Therefore, changes in the perceived level of support systems influence potency, which in turn, influences performance.

There are strong indications that team effectiveness is influenced by team potency (Campion et al. 1993; Guzzo et al. 1993; Shea & Guzzo 1987b). Guzzo et al. (1993) offered a conceptual framework that suggests that factors both internal to the team

(e.g., abilities, experience, skills, knowledge, size, etc.) and external to the team (resources, goals, rewards, etc.) influence potency, which in turn influences team performance.

Campion et al. (1993) grouped 19 characteristics of teams into five broad categories: job design, interdependence, composition, context and process. They tested operational measures of productivity, employee satisfaction and manager judgments about team performance from both team and management data. They found that potency (as a characteristic within the process category) was the only one of the 19 factors that was significantly related to performance measures in all six analyses.

Team Performance

Team performance occurs at individual, group, business unit and organizational levels. Table 1 summarizes measures of performance used as dependent variables in a review of studies from 1990 to 1995 by Cohen and Bailey (see Appendix B). As Table 1 shows, three dimensions of performance are commonly used in studies of teams. These dimensions are behavioral, attitudinal and effectiveness measures. The two most common performance measures are behavioral (e.g., absenteeism, turnover) and attitudinal measures (e.g., employee satisfaction) that focus on individual outcomes (Cohen et al. 1996). The third dimension of team performance is effectiveness, which measures the quantity and quality of outputs such as response times, quality, innovation and customer satisfaction (Cohen and Bailey 1997).

Table 1 illustrates the dominance of the use of perceptions as performance measures and the lack of measurable financial outcome measures (see Appendix B). Financial measures used in prior studies were measures of firm performance, such as return on assets (ROA). Multiple management initiatives and market issues confound these measures and make it difficult to separate the effects of teams.

The literature is sparse in the use of financial measures to monitor performance at the group level. McGrath (1986) said that groups should be measured in context and at the group level. Project teams rarely use objective measures due to the longitudinal nature of their outputs (Cohen and Bailey 1997). Dunphy and Bryant (1996) argued that there have been too few studies using measurable outcomes. Those that do use measurable outcomes tend to concentrate on attitudinal and behavioral outcome measures.

Monitoring measurable outcomes provides a vehicle for adjustment with organizational goals. Alignment of team and organization goals has been found to be a major contributor to the success of team-based organizations (Shea and Guzzo 1987a). Financial targets guide organizational goals, so team goals should have a similar orientation. Indeed, management teams are unique in that their performance goals are largely based on financial metrics (Cohen and Bailey 1997).

Figure 3 diagrams key literature from prior discussion and links to appropriate research questions that are discussed in the next section (see Appendix A).

Research Questions and Hypotheses Development

A team is formed with a particular mission or task to accomplish, and it needs resources and support to achieve its goals. Team members' perceptions of resource needs may influence their collective belief that they can succeed in their task. This collective belief is called team potency. Prior research (Campion et al. 1993; Guzzo et al. 1993) supports team potency as a predictor of the teams' performance. Understanding the perceptions underlying team potency may assist managers in managing team performance. The first research question in this study addresses whether team members' perceptions of support vary by type of support systems, type of team or stage of development. Hypotheses 1a through 1c are illustrated in Figure 4 (see Appendix A).

Research Question 1

Hypothesis 1a

A team's perception of support may influence its performance by creating doubt in either the team's ability to succeed or in management's intent fully to support the team. The support systems that a team considers most important to its success are the first to come under scrutiny as the team evaluates the likelihood of its success. The first hypothesis examines whether there is a difference in how teams view the importance of individual support systems.

> Hypothesis 1a: Team members' ratings of the importance of individual support systems vary by type of support system.

Hypothesis 1b

The resources needed may vary according to type of team. For several reasons, project and parallel teams may need different resources than work teams. For example, project and parallel teams are cross-functional and may require careful group design in order to ensure appropriate membership and skill set. Another consideration may be the predictability of inputs and outputs (Sundstrom et al. 1990). The outcome of project and parallel teams is more unpredictable than that of work teams, increasing the complexity of the task. It may be that group design, defining performance and management support are more important for teams with more complex tasks.

Work teams function within their process, and both input and outcome are more predictable than those of project teams. The less complex task and ongoing nature of these teams may mean that team performance measures and team training are more important to work teams than other types of support systems because these systems support daily decisions and processes.

Hypothesis 1b examines how the type of team may influence differences in team members' perceptions of support.

> H1b: Team members' ratings of the importance of individual support systems vary by type of team.

Hypothesis 1c

The stages of team maturity (working group, pseudo-team, potential team, real team, high-performance team) provide some insight into how teams evolve into productive teams. These stages describe a progressive change in team skill development

that uses relevant support systems. For example, when a team is forming, the membership and purpose associated within the group design support system may be more important to the team than issues relating to the project implementation found in the integration system. In the final stages, rewards and performance measures may become more important to team members.

Hypothesis 1c examines how teams in different developmental stages may differ in the support systems they deem important.

> H1c: Team members' ratings of the importance of individual support systems vary by stage of development.

Research Question 2

Hypotheses 2a and 2b

The second research question examines the relationship between team members' perceptions of support systems and potency. A team is formed with a particular mission or task to accomplish. Teams need resources and support to achieve their goals. Team members assess the knowledge, skills and abilities available within the team, as well as the support systems external to the team, to determine their likelihood of success. They evaluate their ability to reach a goal by evaluating the task at hand and the resources available to them (Guzzo et al. 1993).

Teams that believe they have all the necessary resources to complete their project have a higher level of belief in their ability to succeed (Guzzo et al. 1993). This belief is called team potency. If teams observe that a necessary resource is beyond their reach, their potency drops.

Prior research has linked team potency to team performance (Campion et al. 1993; Guzzo et al. 1993; Stevens and Campion 1994 1999) and leads to the second research question: Is there a relationship between team members' perceptions of support and team potency? The support systems that a team perceives as important may or may not be perceived as sufficiently provided within the organization. A gap is created between perception of need and presence. Ideally, no gap would exist, and teams are provided with every resource that they consider critical. Practically, managers make resource decisions that influence the presence of support systems, and it is probable that deficiencies do exist. For example, a manager may feel that providing 20 hours of team training is adequate for the team to perform. If training prepared the team for goal setting and meeting management but did not cover many aspects of interpersonal skills, it may leave the team unprepared for resolving conflicts and reaching agreements, thus hindering their progress.

Identifying the impact of the perceived inadequacies of support systems on performance through its influence on team potency may provide managers with important information relevant to investment decisions. Hypothesis 2a predicts an association between team perceptions of support systems and team potency. This relationship is illustrated in Figure 5, as shown in Appendix A.

> Hypothesis 2a: Team members' perceptions of support systems are related to team potency.

Prior studies revealed that potency is related to team performance (Campion et al. 1993; Guzzo et al. 1993; Shea & Guzzo 1987b). A team's collective belief that it will succeed in its mission increases their chances of accomplishing its goals. Hypothesis 2b tests this relationship.

Hypothesis 2b: Team potency is positively associated with team performance.

Research Question 3

Hypothesis 3

Managers' perceptions contribute to their decision-making processes. The importance managers assign to individual support systems may influence resource allocation decisions within a team-based organization. When resource constraints exist, it is probable that a manager will not invest in a support system that he or she considers less important than another investment opportunity. Although not specifically tested by Campion et al. (1993), their findings suggested that managers view more observable support (e.g., training, rewards) as more important than less observable support (e.g., management support). It follows, therefore, that if managers perceive certain support systems as yielding more observable results, they will be inclined to invest in those systems.

Campion et al. (1993) found that employees do not necessarily have the same view as managers. Team members, however, may consider that different support systems

are important in order for them to succeed. This leads to the third research question: Do managers' perceptions of support differ from team perceptions?

Hypothesis 3 tests whether there are significant differences in the way managers and team members view support systems.

> Hypothesis 3: Managers' perceptions of the ratings of support systems differ from those of team members.

Research Question 4

A challenge for managers is how to make resource allocation decisions among investment alternatives to maximize team effectiveness and still ensure an adequate financial return for company investors. "A good capital budgeting process combines formal quantitative and financial techniques of project selection with qualitative assessments of risk and an organization's strategic needs (Klammer et al. 2000, 2). Maintaining a team-based system is a long-term commitment and, as such, is a capital budgeting decision. Prior work on teams has focused on qualitative and operational measures rather than financial measures. This study extends the literature by introducing a financial measure based on projected cash flows – a technique used in the capital budgeting decision process.

Cash flow projection is a key part of the capital budgeting process and requires that project benefits and costs be identified. This is especially difficult for intangible investments such as the team-based process. Investments in training and information

systems, for example, yield benefits that are difficult to quantify. This study isolates team projects, estimates incremental cash flow and calculates a financial measure that can be used in the decision-making process. This measure, referred to as the team effectiveness factor (TEF) in this study, is compared to other perceptual measures of performance in order to address the fourth research question: Is the financial measure (TEF) correlated with manager and team perceptions of performance?

Research Question 5

The fifth research question seeks information on the financial measures currently used by companies to evaluate teams. It is possible that many companies have developed financial methods of evaluating team performance. Prior research studies of teams in accounting have failed to capture this information. This study collected and examined financial reporting methods used in participating organizations in order to address the fifth research question: What financial performance measures are companies using to evaluate teams?

CHAPTER 3

METHODOLOGY

Research Design

This study was designed to explore the influence that support systems have on team effectiveness. Support systems are factors of organization context and, as such, need to be studied in an organizational setting. This is a field study that focuses on discovering relationships and interactions among variables in real social structures.

Three approaches were used to examine organization context and its relationship with performance. Survey data were collected from team members and managers in order to explore perceptions of support systems and team performance. The summary data were used to analyze the role that support systems play as potential drivers of performance. These analyses address the first three research questions.

A second approach to soliciting information was to collect financial information on team projects and improvements. These data were used to calculate a cost/benefit measure of performance. This financial measure, the team effectiveness factor (TEF), is discussed thoroughly in a later section of this chapter. Whereas most quantitative performance measures are team specific, this calculated factor was designed as a performance measure that can be used across teams. This calculated measure of performance, TEF, was compared to the team members' and managers' perceptions of performance to identify correlations and trends relating to the fourth research question.

Interviews and discussions provided a third approach for exploring existing measurement systems. The focus of these discussions was to determine what, if any, financial measures of performance are being used in participating organizations.

The first section of this chapter addresses the organizational sample used in this study. The second section defines the dependent, independent and attribute variables and discusses instrumentation. The third section reviews the analytical methods employed. The final section of this chapter discusses a pilot study used to modify the testing process and instruments.

Sample

This field study was conducted with 68 teams comprised of 412 team members from seven companies (Table 2, Appendix B). Two companies come from service industries and five from manufacturing. Two of the companies have employed teams for at least six years and have well-established team systems. Three companies have used teams for less than three years. The remaining two companies are embarking on a renewal effort to revive weakened team systems.

Teams within each company vary with respect to type and stages of development. Table 2 presents descriptive statistics for participating companies and teams (see Appendix B). Work teams represent a substantial portion (78%) of the sample. The real team category (stage 4) has the largest number of teams, comprising 35% of the sample (24 teams). The potential team category (stage 3) is the second largest category,

with 27% of the sample teams. Only 3% of teams consider themselves working groups (stage 1).

Teams in the manufacturing industry represent 66.2% of the sample, and those in the service industry represent 33.8%. The average number of team participants is 6 team members.

The number of teams drives the number of managers included in the sample. Although some managers may supervise multiple teams, the managers completed a questionnaire for each sample team they supervise. Eleven managers did not participate due to unavailability or travel, leaving 57 managers in the sample.

Variables and Instrumentation

Measurement Overview

McGrath (1986) and Campion et al. (1993) argued that three objectives should guide measurements used in the study of work groups. These objectives are to (1) use multiple constructs, (2) minimize common method variance and (3) use the group as the level of analysis. In this research, multiple measures of variables collected from different sources were used – employee perceptions, employer perceptions and financial data. These variables help satisfy the first two objectives. The last objective was to use the group as the level of analysis and was satisfied by averaging individual responses. Wherever individual responses were aggregated into a group measure, means and

standard deviations were reviewed to assess the level of agreement among members and evaluate individual response outliers.

Interviews with management help to determine the factors outside the team system that may influence survey gathered information. Recent layoffs, reorganizations or changes in employee policies are examples of such outside factors. Some circumstances viewed as negative by employees may influence their perceptions of management's decisions and support. Alternatively, recent actions may positively influence their perceptions (e.g., increases in benefits, empowerment). Interviews are open-ended and directed toward discovering general team system characteristics (e.g., number of teams, type of training, group design, location, etc.), as well as recent company actions and policies influencing team members (e.g., reorganization, new management, new responsibilities, changes in benefits or pay scheme, other recent surveys, etc.). Information obtained through these interviews is included in the discussion of the fourth and fifth research questions.

Measurements of support systems and potency are based on perceptions of team members. Generally, perceptions are not considered the most reliable source of data because they may contain self-report bias. Statistical and post hoc remedies may be applied to mitigate some of this bias. However, these methods do not offer reasons for any identified covariance. Valid functional relationships could be disregarded if these methods are strictly enforced (Podsakoff and Organ, 1986).

Typically, observable measures are preferred or are used to verify perceptions. For example, the training support system could be measured using the number of training

hours or dollars spent on training. However, this does not address the quality or adequacy of such training. Team members' perceptions may be influenced by their overall perceptions of the adequacy of the training received.

Seemingly objective measures may not be the best measure of team support systems. A basic premise of this study is that team potency is a key predictor of performance. Since the definition of team potency is that it is a collective belief based on perceptions, these perceptions may, indeed, be the best measures for this study. Shea and Guzzo (1987a, 28) argued that "if the group believes it, then it's real." They offered, as an example, the case of a team unable to discern direction from their performance measures. Objectively, the measures exist. The adequacy, alignment or communication of these measures to the team is called into question when the team is unable to use them for direction. In this case the team's perception that performance measurements were inadequate rendered them unable to proceed successfully with their task. Either the supervisor needs to adjust the performance measures and/or explain to the team their importance and how they fit with the team's goals.

In summary, this study employs three dependent variables – managers' perceptions of performance, team members' perceptions of performance and TEF. Independent variables include seven support systems measures. Team potency is a mediating variable between support systems and team performance. Team type and maturity are moderating variables. The following sections discuss each of these categories of variables.

Dependent Variables

A primary contribution of this study is to involve accounting metrics when evaluating team effectiveness. Attitudinal and behavioral measures have dominated prior research. Accounting metrics may provide quantitative guidance for teams to monitor their progress toward their goals. The strategic intent of establishing teams is to respond to rapidly changing environments by making more efficient, smarter decisions. These decisions and process improvements can be measured in terms of increased capacity or by decreasing the amount of resources required to perform a task (cost reduction).

Team effectiveness is measured using a calculated Team Effectiveness Factor (TEF). The TEF is a ratio of a team's total projects' benefits divided by total cost of implementing and maintaining the project. For each recommendation and improved process, team representatives completed a Project Summary Sheet (see Appendix D). Using this sheet, team leaders accumulated annualized savings and costs of individual projects. Appropriate company personnel (i.e., team system coordinator, accountant) reviewed the savings and cost estimates. In all cases, the reviewer concurred with the originator of the information. The researcher combined the project savings and costs into a calculated TEF for each team. In effect, the TEF represents an estimate based on projected cash flows, similar to capital budgeting estimates.

In addition to the quantifiable TEF measure, both manager and team member perceptions are used to measure performance. In a review by Cohen and Bailey (1997)

five measures of perceptions of performance are commonly used to measure both managers' and team members' perceptions. Managers and team members were asked to rate their team on a 5-point scale for adherence to budgets, adherence to schedules, degree of innovation, project quality and overall performance (Cohen and Bailey, 1997). These elements are included in the general team member individual questionnaire presented in Appendix E Part A (#5, 7, 10, 13, 15). Team members' perceptions are equally weighted and will be averaged into one score. Managers' perceptions of performance were collected with the same items and may be found on the manager questionnaire in Appendix D, Part B (#1, 3, 6, 9, 11).

Mediating Variable

Team potency was measured using an eight-item measure developed by Guzzo et al. (1993). On a Likert scale, each team member indicated the extent to which each of these statements describes the team, with 1 indicating strongly disagree and 5 indicating strongly agree. Responses were reviewed for outliers and averaged into a team score. The following eight statements are included in the team member individual questionnaire.

1. This team has confidence in itself.
2. This team believes it can become unusually good at producing high-quality work.
3. This team expects to be known as a high-performing team.
4. This team feels it can solve any problem it encounters.
5. This team believes it can be very productive.
6. This team can get a lot done when it works hard.
7. No task is too tough for this team.
8. This team expects to have a lot of influence around here.

These items were randomly sorted, and several were reversed scored in the team member individual questionnaire (Appendix E, Part A, #6, 8, 9, 11, 12, 14, 16, 17), along with the perceptions of performance items discussed in the prior section.

Independent Variables[2]

Support system variables were measured using a combination of 19 items extracted from Hall (1998) and 8 items added for this study. Hall's study identified nine support systems: management support, supervisor support, performance measurement, performance appraisal, training systems, rewards systems, information systems, group design and integration. The Hall study included 15 characteristics (items) for each of nine support systems, totaling 135 characteristics in his final instrument. For this study, Hall's survey was modified to include only the most significant characteristics (determined through factor analysis) for seven of his nine systems. The reduction process is discussed at length in the following section. Hall's executive and supervisor support have been combined into one system named management support. Performance appraisal was eliminated because a majority of the characteristics measure an evaluation process internal to the team.

Procedures used to modify Hall's 135-item questionnaire into the 27 items (Table 3, Appendix B) used are described below:

[2] The four support systems discussed in this section are independent variables in the full model depicted in Figures 5 and 10, tested in the second set of hypotheses. They are considered dependent variables, however, in the analysis of variance tests for the first set of hypotheses and hypothesis 3.

Step 1: Downloaded factor loadings for the 135 original items into Excel.

Step 2: Items that loaded similarly (within 5 points) on two factors were considered meta-items and eliminated because they do not belong clearly to one measurement scale. For example, if one item loaded 0.35 on one factor and 0.39 on another, it was eliminated. This reduction of 20 items reduced the original set to 105 items.

Step 3: The remaining items were scrutinized to insure that they measured characteristics external to the team. An additional 35 items were eliminated on this basis. An example of an eliminated item is "My work group uses its goals to guide decision-making." This statement characterizes a process internal to the team rather than a support system characteristic. This step reduced the number of items to 70.

Step 4: The remaining 70 items were grouped according to the factors identified in a 10-factor analysis and sorted by factor loadings. The 5 or 6 items with the highest factor loadings in each group were extracted, totaling 52.

Step 5: Three measurement scales (rewards, training and performance measurement) were clearly identified within 3 factors (totaling 11 items). The remaining 7 factors of the 10-factor analysis were not as clearly defined. Eight of the highest loading characteristics were extracted and used in the remaining four support systems. The result is that 19 of the original items were retained in the modified instrument.

Step 6: The description of each support system was reviewed in conjunction with the items with the highest loadings to insure that the construct was adequately measured. The description was compiled from characteristics discussed by leading authors in team

support systems (Mohrman et al., 1995; Sundstrom et al. 1999). Eight items were added to the measurement instrument to more completely measure characteristics described by these sources. An example of an item added to the management support scale is MS3, "My managers/supervisors follow through with team recommendations in a timely manner." The final instrument contains 27 items.

Table 3 describes each support system and lists the measurement scale for each (see Appendix B). Original items from Hall (1998) provided a parenthetic factor loading reference from Hall's factor analysis, while items added during step 6 are so noted.

Adjusting a tested survey raises concerns about the content validity of the new instrument. Content validity refers to the representativeness of items in a measurement instrument. Essentially, content validity is a judgment that the items measure the construct tested in an instrument. To test for validity, a method designed by Lawshe (1975) is used. This method is discussed below.

Lawshe (1975) developed a method to quantitatively measure the degree of consensus from a panel of experts. The judgment on each item includes selection of whether the individual item being measured is (1) essential, (2) useful but not essential or (3) not necessary in measuring a given construct. The panelists' answers are pooled and the content validity ratio is computed. This ratio is calculated for each item in the survey and is represented by the following formula:

$$CVR = (n_e - N/2) / (N/2)$$

Where CVR is the content validity ratio, n_e is the number of panelists indicating that an item is essential, and N is the total number of panelists. A negative CVR indicates that

fewer than half the panelists judged the item essential. When half the panelists judge the item to be essential, the CVR is zero. A positive CVR result means that greater than half the panel considered this item essential to the measurement.

The instrument used in this study was examined following Lawshe's (1975) method. The content validity instrument was sent to nine content experts in the field of teams and support systems. Five of these experts responded. Five responses are sufficient to confidently calculate the CVR. Each expert has either published extensively, authored books or has extensive practical experience in team management. Both the instrument and the names and positions of these experts in the field of teams and support systems can be found in Appendix G.

Of the 27 items tested, 6 resulted in negative CVRs. This negative result means that these items are not essential items in measuring the construct. Three of these items were in the Training System, two in the integration system and one in the Rewards System. Elimination of these items would result in an insufficient number of items in the measurement scale. As a result, all items remained in the instrument, with reliance placed on post hoc reliability tests, such as factor analysis. The resulting instrument was factor analyzed and tested for internal consistency using Cronbach's alpha on each factor. The results of these analyses are discussed in the Data Analysis section.

The Team Support Survey contains 27 characteristics. Each team member is asked to make two judgments. On a scale from 1-5, the team member indicates how important this item is to the team in achieving his or her goals (importance score). Then,

on the same scale, each team member is asked to designate to what extent the item is present (presence score). Appendix E, Part C, contains the instrument.

The survey answers were scored three ways. The first was to average the individual team member raw Importance scores to obtain a continuous measurement at the group level. This score was used to rank support systems in the first set of hypotheses (H1a, H1b, H1c) and Hypothesis H3.

The second way was to average the individual team member raw Presence scores to obtain a continuous measurement of their perception of the "current state" of resources. These scores are used as the independent variables when testing the influence of support systems on potency (H2a).

The third way was to calculate the gap between resources necessary and those provided. This measure is used when evaluating support systems' influence on potency (H2a). The Presence score and the gap measure were used during analysis for the second set of hypotheses. The gap measure was created for each support system according to the procedure summarized below.

Step 1: The Importance score was subtracted from the Presence score for each team member and characteristic.

a. T1 (importance) – T1x (presence) = T1gap

b. Example: 3 – 4 = '-1'

Step 2: By team member, the gap score for all characteristics of one support system for each score was averaged to obtain a score for each team member (example 1). If, at the team member level, the gap score is greater than zero, then

the gap score is set to zero (Example 2). The rationale for this is that the overall gap measure is one of deficiency. A positive measure would indicate that a support system is perceived as being present in excess of need. Any excess would, most likely, not contribute to potency.

a. (T1gap + T2gap + T3gap)/3 = Team member gap score

b. Example 1: (-1 + -1 + 1)/3 = -0.33 Training gap for team member #1

c. Example 2: (-1 + 3 - 1)/3 = 0.33 Training gap for team member 2 is 0.

Step 3: By team, all team members' gap scores were averaged to obtain an overall gap score for the support system by team.

Managers completed a similar instrument, making a single judgment on each item. The managers determined on a Likert scale how important an item was for their team to perform (Appendix F, Part C).

Team Type

An informational questionnaire completed by the team manager requests information on team type and team size. For each team that he/she supervises, the supervisor read a description of project, parallel and work teams and then determined which description was most appropriate for this team. This informational questionnaire can be found in Appendix F, Part A (#7).

Team Maturity

The informational questionnaire completed by the individual teams also includes a question asking them to select one of five statements that best describes their team. Each of these statements describes internal process characteristics of each phase of development. This question may be found in Appendix E, Part B, #16.

It was not expected that all members of the same team would select the same stage of development. In order to classify each team appropriately, the researcher assigned a value to each stage:
1 (working groups), 2 (pseudo-team), 3 (potential team), 4 (real team) and 5 (high-performance team). Team members' assigned values were averaged and a stage assigned according to the following scale:

1 _____ 2 _____ 3 _____ 4 _____ 5
1.8 2.7 3.5 4.3

1.00 to 1.80 = Working Group
1.81 to 2.70 = Pseudo-team
2.71 to 3.50 = Potential Team
3.51 to 4.30 = Real Team
4.31 to 5.00 = High-Performance Team

Standard deviations on each team were examined to determine the extent to which team members agreed with the average score.

Testing Procedures

Team members completed individual questionnaires (Appendix E) in a team setting to allow the researcher a greater level of control. The average time to finish the questionnaire was approximately 40 minutes.

Managers of teams completed a survey (Appendix F) for each team they supervise. In most cases, the managers were brought together and completed the questionnaire in approximately 15 minutes. This procedure was not possible in all situations, and 8 managers completed the survey individually and mailed it directly to the researcher. The project savings sheets were completed by the team leaders or managers and reviewed by the team system coordinator.

An outline of research questions, hypotheses, instrumentation and analysis method is found in Table 4, Appendix B.

Pilot Study

Performing a pilot study allowed examination of the survey process. The researcher met with 17 team members from three teams and followed the testing procedures. Upon completion of the survey process, the researcher entered into a debriefing process about the instruments. Issues such as length, ambiguous questions and language were addressed. This focus group approach to the pilot study provided the researcher with key information to modify instruments and testing process as needed.

The pilot sample was too small to partition by type or maturity level. Descriptive analyses, however, allow examination to determine whether the results appear to be as expected. The descriptive statistics provided in Table 5 reflect scores from 17 individual team member surveys and indicate that differences may indeed exist in the team members' perceptions of the individual support systems (see Appendix B). This

presentation highlights the broad range of scores. Importance scores ranged from 3.868 for Training Systems through 4.559 for management support.

Table 6 provides a ranking of these support systems by both importance score and gap score (see Appendix B). The Rewards and Management support systems show the largest gap score of -0.6. This suggests that team members consider that these support systems are lacking. On the other hand, group design (Gap=0.0) and integration (Gap=0.1) have low scores, indicating that the team members are satisfied with these resources.

Note that, while the management support system appears to be perceived as the most important support system (mean=4.59), its gap score (gap=-0.6) would indicate that it is also perceived as the most deficient.

CHAPTER 4

RESULTS: SUPPORT SYSTEMS AND PERFORMANCE

Data Analysis

This field study collected data from 68 teams at seven companies. Validity and reliability tests (i.e., Cronbach's alpha, factor analyses) were performed using responses from the 412 individual team members. Thereafter, analyses were conducted at the group level, with data from the 68 teams. Results of factor analyses are first presented to illustrate the development of final independent variables. This is followed by a discussion of descriptive statistics.

Seven support systems were predicted a priori as independent variables and were measured by 27 items included in the team member survey. These support systems include group design, performance measures, rewards, integration, training, information systems and management support. The importance scores were factor analyzed using an orthogonal varimax rotation. Under this rotation, an item will usually load high on one factor and considerably lower on the others while maintaining the same relationships with the other items. This is particularly of value in this instance since these variables are potentially highly correlated with one another in organizations. Using the minimum

eigenvalue criteria of 1.0 and confirmed upon review of the scree plot, five factors emerged.

Factor analysis tests the extent to which items measure a particular construct. Ideally, the seven support systems predicted a priori would be displayed as separate factors. Preferably, a single item will load high on one factor and low on the others. This indicates that the item explains a larger amount of variance in that one factor than it does in the remaining factors.

When the analysis was performed on the sample, five factors emerged. Eigenvalues represent the amount of variance accounted for by a factor. Factor analysis includes a function whereby it settles on the number of factors required to explain the most variance. In this analysis, five factors were required to explain 53.6% of the variance.

Seven factors were predicted a priori. Five factors means that some items describe more than one support system. These five factors were analyzed using procedures (Hair et al. 1995) applied to each item. Table 7 displays the results of the factor analysis procedure prior to elimination of items (see Appendix B). An item was eliminated when it loaded equivalently (within 0.05) on more than one item. The shaded items are retained in the data for further analysis. Table 8 lists and describes the items retained in the scale. More information on the retained items is presented below.

The following schedule facilitates interpretation of item and variable designations shown here and in the first column of Table 7:

MS	Management Support System
PM	Performance Measurement System
T	Training System
R	Rewards System
IS	Information Systems
GD	Group Design System
INT	Integration System

The item designation identifies the support system and the specific item in that system. For example, MS1 represents the first item listed in the management support system. Table 3 provides a full listing of all items and their descriptions (see Appendix B).

The management support items are shown here as an example:

EXAMPLE 1: Table 7 Excerpt

ITEM	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
MS1*	0.458	0.442	0.211	-0.016	0.141
MS2	0.628[1]	0.311	0.132	0.002	0.372
MS3	0.357	0.564[2]	0.233	0.046	0.213

* Omitted as a meta-item.
Note 1: Items retained on Factor 1, renamed Design & Measurement (DM) System
Note 2: Items retained on Factor 2, renamed Rewards (REW) System

The loadings on each item were reviewed horizontally across the factors and the highest loading highlighted for each item. In this excerpt, MS2's highest loading is on Factor 1 and MS3's highest loading is on Factor 2.

Each item is then reviewed to ascertain whether it should remain in the model or be eliminated. It is desirable that an item has one loading value considerably higher than the other values. An item is called a meta-item (Hall 1998) when it loads equivalently on two factors (within 5 points). This meta-item is eliminated because it explains some of the variance in two variables, making interpretation difficult. Table 7 shows that MS1

loads equivalently on both factors 1 and 2 and is eliminated (meta-item) (see Appendix B). Another item loading on two factors is PM1. It loads on Factors 1 and 4. These two meta-items are eliminated because they contribute to the variance for two separate factors:

MS1 My company's managers/supervisors are open to multiple perspectives (such as different points of view).

PM1 My team has regularly planned performance reviews.

The highest loading for three items was on the fifth factor, and each item was predicted to define a different support system a priori. These items are as follows:

PM3 My team has regularly planned performance reviews.

T4 My team gets training when we need it.

IS1 My team can easily collect, organize and sort information needed to perform its work.

Although these items loaded on the same factor, they did not appear to describe a single construct and were eliminated. Future investigation into these items may discover the construct they have in common.

One item predicted a priori to describe the integration system loaded onto another factor that contains items describing performance measurement and group design. This item did not appear to describe these systems and was omitted (INT3):

INT3 My team or representative meets with other teams to share information.

The management support system contained three items a priori. One item was eliminated because it loaded evenly on two factors (discussed earlier). One item loaded onto the factor describing the Rewards System (MS2), whereas the other loaded onto the first factor describing performance measurement and group design (MS1). Both items were retained in the factor where they loaded.

MS2 My company's managers/supervisors help provide teams with the resources they need to perform work.

MS1 My company's managers/supervisors are open to multiple perspectives (such as different points of view).

The final model contains 21 items loading onto four factors, with 0.45 as the lowest loading. The four independent variables are redefined as follows:

1. Design and Measurement System (combines performance measures and group design)
2. Rewards System
3. Communication System (combines information systems and integration)
4. Training System

Table 8 describes the four support systems and the items included in each system (see Appendix B). The table also provides the item factor loadings and Cronbach alpha scores for each system after the modifications described above. Cronbach alpha is a reliability test that shows how well the selected items contribute in measuring the construct. Scores of .70 are considered reasonably strong predictors (Nunally and Bernstein, 1995). All scores reported on Table 8 are in excess of .70, and most are above .80. An excerpt from Table 8 is shown below.

EXAMPLE 2: Table 8 Excerpt

Factor Loading[1]	Item Code	Support System Items and Description
		Design & Measurement Systems (DM): Measures appropriate mix of people and skills, the extent to which the team understands their purpose, whether the team has the authority needed for their purpose, and whether appropriate measures are in place. ($\alpha = 0.87$)[2]
0.572	GD1	My work group has the skills it needs to perform work well.
0.588	GD2	My team understands its purpose.
0.536	GD3	My team's membership is appropriate for its mission or purpose.
0.691	GD4	My team has the authority it needs to perform its work.
0.662	MS2	My company's managers/supervisors help provide teams with the resources they need to perform work.
0.492	PM2	My team uses specific performance measurements to track team goals.
0.630	PM4	My team's performance measures are appropriate to our team's purpose.

[1]These factor scores are from a factor analysis run on the final 21 items.
[2]Cronbach alpha score for the variable's measurement scale.

This excerpt describes the Design and Measurement System and lists the seven items used to measure this construct. Four items from the original group design scale, one from the original management support scale and two from the original performance measurement scale comprise the final set of items used for the Design and Measurement System. All seven items work in conjunction to measure this system as evidenced by the overall Cronbach alpha score of 0.87. The Design and Measurement Systems' scale appears to be a reliable measure of the Design and Measurement System.

Table 9 presents correlations, means and standard deviations of the dependent, mediating and independent variables (see Appendix B). Standard deviations for all variables are low, ranging from .293 for the Communications System Gap Score to .634 for the Rewards System Presence variable. The dependent variables include teams' and managers' perceptions of potency and performance. Team's perception of potency

(4.039) is higher than managers' perception (3.677), with both variables significantly correlated (<.01). Team's perception of performance (3.796) is lower than managers' perception (4.349) and may suggest that teams are more critical of their performance than are managers.

Independent variables are presented in three forms for each of the four support systems. The first set of independent variables is the teams' perception of the importance of these support systems. Means for these variables range from 3.507 for the Training System to 4.182 for the Design and Measurement System. The Design and Measurement System is significantly correlated to team perceptions of potency (r=.365) and performance (r=.369) and managers' perception of performance (r=.383). The Rewards System (r=.280) and the Training System (r=.216) are marginally significant with managers' perception of performance. All four variables are significantly correlated with each other.

The second set of independent variables is the teams' perceptions of the presence of the four support systems. All of the Presence variables are related to the Importance variables except for Presence of the Training System, which is not correlated to the Importance of the Rewards System. All means for the Presence variables are lower than their corresponding Importance variables.

The Presence of the Rewards (r=.423), Design and Measurement (r=.487) and Communications Systems (r=.261) are significantly correlated to team potency, whereas the Training System is marginally correlated (r=.206). The Rewards (r=.415) and the Design and Measurement Systems (r=.578) are significantly correlated to team

perception of performance, whereas the Training (r=.222) and Communications Systems (r=.234) are marginally correlated. None of the Presence variables are correlated to managers' perception of potency or performance.

The final set of independent variables is the gap score for each of the four support systems. The Rewards, Design and Measurement and the Communication gap variables are significantly correlated to both team perception of potency and performance. No correlation exists between these variables and manager perceptions. The Rewards gap variable (r=.340) and the Design and Measurement gap variables (r=.243) are both significantly correlated with team perception of the Training System.

Field Experiment

Study results are organized by hypothesis for the first three research questions. Hypotheses 1 through 3 are generally supported, and results are discussed below. As a reference tool, Table 4 gives a summary of research questions, hypotheses, instrumentation and analysis procedures (see Appendix B). In addition, Table 10 summarizes results for hypotheses 1 through 3 and supports the following discussion of results. Chapter 5 presents the results of the field study examining the fourth and fifth research questions.

Research Question 1

Hypotheses 1a, 1b and 1c predict that team members prioritize their support needs differently according to type of support system, type of team and the team's level of maturity. Hypothesis 1a predicts that team members perceive certain support systems as more important than other support systems. Table 11 presents the results of these tests (see Appendix B).

Covariance scores from the support system survey were examined using a one-way repeated measures analysis of variance (ANOVA) to determine whether there is a statistical difference among support systems ($p<.0001$). The repeated measures method is appropriate when each subject contributes a score to each condition. In this instance every team provided a score for each of the four support systems. The hypothesis is supported, indicating that there is a difference among the means of the four variables when both the importance scores and the gap scores are included. The ANOVA test compares the means of all four support systems and determines that there is a significant difference among the support systems. It cannot, however, indicate which systems are significantly different from each other.

The Tukey test was performed to determine which systems differ from each other. The matrix in Table 12, Panel A, indicates that team members view the importance of the Rewards System as statistically different from each of the other three variables (see Appendix B). In addition, the Design and Measurement System significantly differs

from both the Training and Communications systems. There is no significant difference between the Training and Communications Systems.

Panel B of Table 12 presents the results of the Tukey Test performed on the gap variables to determine which pairs of variables are significantly different (see Appendix B). Results show that the Rewards System is perceived as significantly more deficient than the other three systems.

Additionally, comparing the rankings and means of support systems by Importance scores provides a relative level of importance placed on support systems (Table 11, Appendix B). The means for the Design and Measurement (4.18) and Rewards (3.85) Systems appear to be more important than Communications (3.62) and Training (3.51) Systems to team members. The gap scores for both Design and Measurement (0.50) and Rewards (0.90) Systems are also higher than the Communications (0.39) and Training (0.33) Systems. This may indicate a greater sensitivity to deficiencies in both these systems.

A post hoc test was performed to determine whether teams in service and manufacturing industries perceived the importance of support systems differently. The sample of 68 teams was divided according to industry, with 23 teams in the service industry and 45 in the manufacturing industry. An ANOVA analysis was performed to test whether teams in these two separate industries view support systems differently. Table 13 presents these results (see Appendix B). Results indicate that teams in the service and manufacturing industries view the Training System (p=0.0086) and the Design and Measurement Systems (p=0.0039) differently. In addition, teams in the

service industry rate all four systems higher, on average, than teams in the manufacturing industry. Team members in both industries considered the Design and Measurement System and the Rewards Systems as the two most important systems.

Hypothesis 1b predicts that various types of teams differ in their perception of Importance scores on each support system. Raw scores from Part C of the Team Support Survey were categorized according to the type of team providing the score. These three team types are work teams, parallel teams and project teams. Table 14 shows the results of these tests (see Appendix B). There is a significant difference in cell sizes, and for this reason, results of analysis of variance tests are inconclusive.

ANOVA results indicate that there is a significant difference across teams in how important they perceive the Communication Systems ($p = 0.0025$) to their work. The disparity in cell size may influence the robustness of these results. The nonparametric Kruskal-Wallis test is less sensitive to cell size differences and was performed on each support system. Table 14, Panel A, presents the results of these tests, showing that Communication Systems ($p=0.001$) is significant, while the Design and Measurement System ($p=0.074$) is marginally significant.

To decrease the disparity in cell sizes, parallel and project teams were combined into one type of team called cross-functional teams. Project and parallel teams have the common characteristic that their team members are from different functional areas. Combining these two types of teams into one type, Cross-functional Teams, and performing ANOVA yield the results exhibited in Table 14, Panel B (see Appendix B). ANOVA results now agree with the Kruskal Wallis test, both showing the Design and

Measurement System (p=0.0545) and the Communications System (p=0.0013) as significant.

Although the ANOVA results are inconclusive because of disparate cell sizes, efforts to increase the sample in the smaller cells yielded results consistent with those of the Kruskal Wallis test. These tests support the hypothesis that different types of teams may view the Design and Measurement System and the Communications System differently. There are not sufficient cell sizes to test whether teams of types and in different industries view support systems differently.

Hypothesis 1c predicts that team members' perceptions of the importance of support systems may vary by stage of development. Table 2 presents the number of teams in each stage (see Appendix B). Stage 1 (working groups) has 2 teams; Stage 2 (pseudo-teams) has 10 teams; Stage 3 (potential teams) has 20 teams; Stage 4 (real teams) has 24 teams; and Stage 5 (high performing teams) has 12 teams. Teams were segregated into five groups according to the assigned stage of maturity. Because Stage 1 has only 2 teams, it was omitted. The remaining four stages were tested, and results are shown in Table 15 (see Appendix B). Again, the Kruskal-Wallis Test and a one-way ANOVA were performed to determine whether there is any significant difference in team perception of support systems across different stages of development. The ANOVA analysis indicates a significant difference in the Design and Measurement System (p=0.003) across stages. The Kruskal-Wallis test (p=0.0014) supports these results. There are not sufficient cell sizes to test whether teams in different industries and stages view support systems differently.

In summary, there is a difference in how team members view the importance of individual support systems, both overall and by industry. Generally, team members in the service industry view each support system as more important than do those in the manufacturing industry, with significant differences seen in the Rewards and Design and Measurement Systems. Ordering the importance score means of teams in each industry shows that team members in both industries rank the systems in the same order, with the Rewards and Design and Measurement Systems as the two most important systems.

Project teams view both the Communications and the Design and Measurement systems as significantly more important than work teams view these systems. This is reasonable considering the characteristics included in the Communications System. This system includes interactions with customers and suppliers, as well as other functional areas and managers. Task requirements and membership of this type of team require a broad knowledge base of the business and varied information sources. On the other hand, the task of work teams concerns a process familiar to all members and may not have the same need for external information.

The Design and Measurement System considers whether team members' contain the appropriate skills for their task. In addition, it considers understanding of purpose, appropriate measures and authority. Assignment to project teams is on the basis of skill sets contributing to the task at hand. Normally, project teams are made aware of the purpose of the teams and management's expectations. It is reasonable that project team members consider these elements as critical to their performance.

Teams in the last stage of development (high performance teams) view the Design and Measurement System as more important than do teams in the earlier stages. Teams in this last stage have well-developed work processes and are more aware of what resources they need. In addition, this system is considered to be the most important support system by teams in all stages of development.

Research Question 2

Hypothesis 2a predicts a relationship between team members' perception of support systems and team potency, while Hypothesis 2b predicts a positive association between potency and team performance. Team potency acts as a mediating variable between support systems and performance (see figure 5, Appendix A).

Team potency is the team perception that it can succeed. One of the elements driving this perception is sufficiency of organizational support. Simply stated, "Do we (the team) have what we need from the organization to do the job?" Team members assess the presence of relevant support systems and whether or not they are sufficient. This judgment involves both an assessment of need and the current level of resources. Therefore, the relevant independent variables are the measures of presence and deficiency (gap).

Results of analyses are presented in three sections. The first section presents results of regressions using the Presence scores as independent variables, first in combination and then as single independent variables in simple regressions.

The second section presents the results of analyses using the gap scores as independent variables. Again, the regressions are performed with all four variables and then with individual support systems as independent variables.

The third section provides results of additional analyses testing potency as a mediator between support systems and performance. These analyses test the influences of both the Presence and gap variables, singularly and in combination. Table 16 presents both a summary of the results and the order of the following discussion (see Appendix B).

Presence Scores as Independent Variables

Hypothesis 2 predicts that support systems have a significant relationship with team potency. This is tested using the support system Presence scores as the independent variable in the following five equations:

$$POT = \beta_1 + \beta_2 DMx + \beta_3 COMx + \beta_4 TRNGx + \beta_5 REWx + \varepsilon \quad (1)$$
$$POT = \beta_1 + \beta_2 DMx + \varepsilon \quad (2)$$
$$POT = \beta_1 + \beta_2 COMx + \varepsilon \quad (3)$$
$$POT = \beta_1 + \beta_2 TRNGx + \varepsilon \quad (4)$$
$$POT = \beta_1 + \beta_2 REWx + \varepsilon \quad (5)$$

The first regression tests the influences of these support systems in combination with each other. Table 17, Panel A, presents the results of these two-tailed tests. The Design and Measurement System is both positive and significant (p=0.0084). Although insignificant, the negative signs on the Communications and Training Systems are unexpected and are discussed in a later section.

The next four equations regress potency directly on each one of the support system variables. Results of these four equations are found in Table17, Panel B (see Appendix B). The Rewards System (p=0.0003), Design and Measurement System (p=0.0001) and the Communications System (p=0.0313) are significant predictors of team potency, while the Training System is marginally significant (p=0.0914). Interpretation of these results is that the presence of each of the three support systems has a positive relationship with team potency. Hypothesis 2a is supported using the Presence variables.

Gap Scores as Independent Variables

Team potency is regressed on the support system gap scores as independent variables to test influences of deficiencies in these support systems on potency in combination and individually. The following five equations outline these tests:

$$POT = \beta_1 + \beta_2 DMgap + \beta_3 COMgap + \beta_4 TRNGgap + \beta_5 REWgap + \varepsilon \quad (6)$$
$$POT = \beta_1 + \beta_2 DMgap + \varepsilon \quad (7)$$
$$POT = \beta_1 + \beta_2 COMgap + \varepsilon \quad (8)$$
$$POT = \beta_1 + \beta_2 TRNGgap + \varepsilon \quad (9)$$
$$POT = \beta_1 + \beta_2 REWgap + \varepsilon \quad (10)$$

Equation 6 tests the influence of all four support systems in combination on potency. Results of this two-tailed analysis are found in Table 18, Panel A, and they show that the Rewards System variable is both negative and significant (p=0.0222). This means that a deficiency in the Rewards System has a significant negative relationship with team potency. In other words, a deficiency in the Rewards System could decrease team potency.

The next four equations regress potency directly on each one of the support system variables. Results of these two-tailed tests are found in Table 18, Panel B (see Appendix B). Three support systems are found to be a significant predictor of team potency. These three systems are the Rewards System (p=0.0010), the Design and Measurement System (p=0.0083) and the Communications System (p=0.0434). This is interpreted to mean that a deficiency in three support systems has a negative relationship to team potency. A deficiency in the Training System is not found significantly to influence team potency. Hypothesis 2a is supported using the gap measure.

In summary, both the presence and deficiencies in support systems influence team potency. The exception is a deficiency in the Training System. It is possible that a deficiency in the communication, decision-making and group meeting skills has a more direct negative influence on internal processes, which in turn, influences team performance. This suggests the possible presence of another mediating variable (team processes).

Mediation Tests

A series of regression equations was used to test team potency as a mediating variable according to procedures outlined by Baron and Kenny (1986). Figure 6 diagrams the procedures used to test for mediation (see Appendix A). This illustrates the regression series and outlines the qualifying conditions.

The first regression equation (Figure 6) regresses the mediator (potency) on the four independent variables (support systems). The second equation regresses the

dependent variable (team performance) on the four independent variables (support systems). The third equation regresses the independent variable (team performance) on both the mediator (potency) and the independent variables (support systems).

To support mediation, three conditions must exist. First, equations 1 and 2 must show that a single independent variable influences both the mediator and the dependent variable. Second, the influence of the independent variable in the third equation must be less than that in the second equation. Third, there must be a significant increase in explanatory value, with the third equation measured by R^2.

This series of three regressions is performed twice, once using the support system Presence variables (TRNGx, REWx, DMx and COMx) and again using the support system gap variables as independent variables (TRNGgap, REWgap, DMgap and COMgap).

Independent Variables – Support System Presence Scores

First, the regressions are performed using support systems' presence as the independent variables (TRNGx, REWx, DMx and COMx). Table 19 shows the results of these analyses (see Appendix B). The first equation regresses the mediator (potency) on the four independent variables (TRNGx, REWx, DMx and COMx).

$$POT = \beta_1 + \beta_2 DMx + \beta_3 COMx + \beta_4 TRNGx + \beta_5 REWx + \varepsilon \qquad (11a)$$

The results of the first regression support that the Design and Measurement Systems significantly influence (p=0.0084) team potency. In other words, the greater the team's perception that the Design and Measurement Systems is present, the higher the

team potency. This independent variable, the Design and Measurement System, is the variable of interest in the next two equations.

The second equation regresses the dependent variable (team performance) on the independent variables (4 support systems). The dependent measure, $PERF_{TEAM}$, is measured using the team members' perception of their performance.

$$PERF_{TEAM} = \beta_1 + \beta_2 DMx + \beta_3 COMx + \beta_4 TRNGx + \beta_5 REWx + \varepsilon \quad (11b)$$

Results for equation 11b indicate that the Design & Measurement System ($\underline{p}<.0001$) has a significant positive influence on team performance (Table 19, Appendix B). Therefore, the more the team perceives the Design and Measurement System to be present, the higher the performance.

The third equation regresses the dependent variable used in Equation 2, $PERF_{TEAM}$, on both the independent variables (support systems) and the mediator (potency).

$$PERF_{TEAM} = \beta_1 + \beta_2 DMx + \beta_2 COMx + \beta_2 TRNGx + \beta_2 REWx + POT_i + \varepsilon \quad (11c)$$

The Design and Measurement System ($\underline{p}=0.0002$) and potency ($\underline{p} = 0.0003$) are both found to have significant positive influences on performance.

To support mediation, equations 11a and 11b must show that the independent variable influences both the mediator and the dependent variable. The results indicate that this is true for the Design and Measurement System. In the third equation (11c), the influence of the independent variable must be less than that in the second equation. The

results for equation 11c show that the parameter estimate for the design and measurement variable is lower (β=0.51404) than that in equation 11b (β=0. 67754). These results support potency as a mediator between the Design and Measurement System and team performance. In addition, there is a significant increase in the explanatory value of the model indicated by an increase in R^2 between equation 11b (R^2=.4075) and equation 11c (R^2=.5209).

The first condition requiring that the independent variable have significant influences on both potency and performance are not met by the Communication Systems. Although the Communication System shows significance in the second and third equations, it is irrelevant when testing for mediation because it was not significant in the first equation. The negative sign, however, is not predicted. Potential explanations could include micromanagement of team members or information overload. The unpredicted influence of communications was further examined by running regressions by industry and by excluding one company at a time. The results of all of these tests show the Communications System with a negative sign. In addition, the communications variable was used as the only independent variable in these regressions, and the resulting sign was positive. Results of this test are presented in the following section.

Independent Variables – Individual Support Systems Presence Scores

The first set of equations tested the influences of four independent variables on potency and performance. Partitioning out one variable at a time and performing the regressions on each variable results in two significant effects. Both the Rewards System

and the Design and Measurement System are supported as being mediated by team potency. The equations and results are shown in Table 20 (See Appendix B).

Running the regressions on individual independent variables yields positive signs on all support systems for all equations, as predicted. The behavior of the variables changes when in the presence of other support system variables. When the variables are used in the same equation, both the Training System (TRNGx) and the Communication System (COMx) result in negative signs for all three equations, while the Rewards System (REWx) is negative in only one equation (see Table 19, Appendix B). This finding implies more complex relationships among these variables than predicted and warrants future investigation.

A possible implication of these unexpected signs is that team processes may mediate both the Communication and Training Systems. As previously discussed, the Training System may have a direct effect on interpersonal skills. The Communication System involves incoming and outgoing information concerning suppliers, customers and other functional areas. This information may have a significant influence on how teams perform their meeting tasks and decisions, elements essential to effective team processes.

Figure 7 summarizes the results of the regressions using the support systems' presence scores (see Appendix A). The parameter estimates originate from the individual regressions documented in Table 20 (see Appendix B). All paths shown represent significant relationships. Paths and parameter estimates highlighted in bold print indicate paths supporting team potency as mediating the effects of the Design and Measurement System and the Rewards System on performance.

Independent Variables – Support System Gap Scores

The relationship among various support systems and their effects on potency are also explored using the gap scores for each support system, again using the series of equations labeled 12a, 12b and 12c. Results of all regressions for this set of equations are presented in Table 21 (see Appendix B).

Equation 12a represents the first in this set of three regressions and tests the effects of the support system gap measures on potency.

$$POT = \beta_1 + \beta_2 DMgap + \beta_3 COMgap + \beta_4 TRNGgap + \beta_5 REWgap + \varepsilon_i \qquad (12a)$$

The parameter estimate for the Rewards System is negative and significant (p=.0222). As the teams' perception of a deficiency in this system increases, their potency decreases.

In the second regression (Equation 12b), a deficiency in the Design and Measurement System has a significant negative influence on the team's perception of performance (p=0.0231). The more a team perceives insufficient support in the Design and Measurement System, the lower their perception of its performance.

$$PERF_{TEAM} = \beta_1 + \beta_2 DMgap + \beta_3 COMgap + \beta_4 TRNGgap + \beta_5 REWgap + \varepsilon \qquad (12b)$$

The third equation (Equation 12c) tests the effects of the gap independent variables and potency on team performance and finds that both potency (p=<0.0001) and the design and measurement variable (p=0.0319) are significant.

$$PERF_{TEAM} = \beta_1 + \beta_2 DMgap + \beta_2 COMgap + \beta_2 TRNGgap + \beta_2 REWgap + POT + \varepsilon \quad (12c)$$

The results of these three regressions fail to satisfy all conditions necessary to support potency as a mediating variable. Equations 12a and 12b fail to both show the same independent variable significantly influencing potency and performance. Independent variables are separately tested and results discussed in the next section.

Independent Variables – Individual Support Systems Gap Scores

The same tests used to examine the effects of individual variables' Presence scores are performed on the individual support systems' Gap scores. The equations and results of these tests are shown in Table 22 (see Appendix B).

Results presented Table 22 indicate that a deficiency in the Design and Measurement System has a significant influence on potency and performance. The test satisfies all the conditions to support mediation. In addition, the signs of all parameter estimates in all equations are negative, as predicted.

Figure 8 presents a summary of results using deficiencies in support systems as independent variables (see Appendix A). The bold lines and parameter estimates highlight the Design and Measurement System as the only support system for which team potency mediates performance. Other paths shown, although significant, do not support potency as a mediator.

In summary, team potency mediates the effects of each support system's presence when tested separately. Taken together, however, the dynamics among the systems

change, and the Rewards and Design and Measurement Systems are the only systems still mediated by team potency. When deficiencies in support systems are considered, three support systems (excluding training) are mediated by team potency. Only the Design and Measurement System prevails, however, when all supports are present.

As the relationships of the support systems on potency change when tested together, so also does the sign of several variables. This suggests a more complex relationship among variables than predicted and, perhaps, the presence of another mediating variable.

Hypothesis 2b predicts a significant positive relationship between potency and performance. Table 22 presents the results of this simple regression analysis of Equation 13 (see Appendix B).

$$PERF_{TEAM} = \beta_1 + POT_i + e_i \qquad (13)$$

One-tailed test results support this hypothesis ($p<.0001$) and indicates that there is a significant positive relationship between team potency and team performance. This finding is consistent with prior studies (Campion et al. 1993).

Table 23, Panel B, explores whether a similar relationship between potency and performance exists with manager perceptions. Results of a one-tailed regression support that manager perceptions of performance is influenced by manager perception of team potency ($p=.0304$).

Research Question 3

Hypothesis 3 suggests that managers' perceptions of the importance of support systems may differ from those of team members. Table 24 shows the results of an ANOVA supporting this hypothesis (see Appendix B). Managers and teams significantly differ in how they perceive the importance of the Training (p=.037) and the Communication Systems (p=.003). However, there is no significant difference in how managers and teams perceive the Rewards and the Design and Measurement Systems.

Additionally, the averages for each support system are higher for team managers than are those for team members. The most important support system for managers is the Training System, followed by the Design and Measurement System. The last two support systems are the Communications System and the Rewards System. It is interesting to note that, although the Training System is ranked as most important for managers, it is least important to team members, and a deficiency in training perceived by team members was not found to significantly influence team potency. The Rewards System is ranked last in importance by managers, although a deficiency in this system, as perceived by the teams, significantly influences potency, as previously discussed.

Post hoc analysis was performed to determine whether team members and team managers also differ in their perception of team potency. Table 25 presents the results of an ANOVA showing that team members and managers significantly differ in their perception of team potency (p=0.0014) (see Appendix B). Kruskal-Wallace test results find that team members and managers also view team performance marginally differently.

Descriptive statistics in Table 9 present the results of correlation analysis of managers' and teams' perceptions of team potency and performance (see Appendix B). Manager perception of team potency is significantly correlated to both team perception of performance ($\underline{r}$=0.246) and team potency ($\underline{r}$=0.379). This correlation is unexpected and suggests that team potency is influenced by how well the manager believes the team is performing. Team perception of potency and performance are more highly correlated ($\underline{r}$= 0.609). This high correlation is expected since regression analysis indicates a significant relationship.

In summary, team managers view the Communication and Training Systems as significantly more important than team members perceive them. This perception may influence mangers' decisions to invest time and resources into the development of these two systems over the rewards and performance measurements systems. Prior discussion indicates the influence of the Training System on team potency and performance is not as strong as the other systems.

CHAPTER 5

RESULTS: FINANCIAL PERFORMANCE MEASURES

The final two research questions of this field study are examined using survey information, observation and discussions with team members and managers. The fourth research question examines whether a financial metric (TEF) calculated from projected incremental cash flow estimates is related to team members' and managers' perceptions of performance. The fifth research question explores the financial measures that companies are using to measure team performance.

Of the seven companies in the study, two companies (B and C) chose not to participate in gathering information required for the fourth research question. The remaining five companies did participate, but the level of success in accumulating project savings varied. Reasons for restrictions varied among companies. Discussion of these reasons contributes to the development and use of the team effectiveness factor (TEF) to measure team performance. All seven companies are included in the company reviews.

This chapter is divided into five sections. The first section previews the discussion of individual companies by describing the supporting appendixes information and how it is used in the company analysis. The second section discusses each company, providing background and highlighting key information. The third and fourth sections address the fourth and fifth research questions. The final section provides an overall summary of the field study findings.

Reports Description

As a field study, understanding the company culture and context is important. This understanding helps to provide complete explanations when analyzing results of interviews and surveys. The field study findings are presented one company at a time. Discussion of each company is divided into five sections: (1) company profile, (2) descriptive information, (3) operational measures, (4) TEF and (5) company summary. Appendixes for each company support the text discussion. Each appendix consists of a summary sheet and a series of "team snapshots."

Each company's appendix begins with a summary sheet providing key information for the each company. It presents information by team, such as the stage of development, operational measures, financial measures and perceptual measures. The summary sheet details information found in the individual team snapshots. Example 2 shows how this sheet is structured. The example shows that team 1 is in the fourth stage of development. Eighty percent of the team members selected "cycle time" as a measure used to evaluate the team. Other operational measures listed are quality, quantity, cost control, customer satisfaction and speed. Forty percent of team members said they were evaluated using one or more financial measures. The TEF measure for this team is 12.9.

Perceptual measures include the team potency score of 4.54 and team's perception of performance (4.06) and the team manager's perception of performance (4.00). The last column averages the support system gap scores and presents an overall gap score for the team. For this team (0.11) is the average of support systems scores on the team's detail sheet in the appendix [(0.06) + (0.12) + 0 + (0.26) / 4 = (0.11)].

EXAMPLE 2

COMPANY SUMMARY SHEET

Operational Measures

Team Number	Stage of Development	Cycle Time	Quality	Quantity	Cost Control	Customer Satisfaction	Speed
1	4	80%	90%	70%	50%	70%	80%

Financial Measures | Perceptual Measures

Financial Measures	T.E.F.	Team Potency	Perf (Team)	Perf (Mgr)	Average Gap
40%	12.9	4.54	4.06	4.00	(0.11)

The company summary sheet is followed by team snapshots that summarize information from team members and brings together relevant data and responses to "paint a picture" for each team. This information includes team specific information gathered from all open-ended discussion comments, performance measures, support system gap scores, as well as team member and manager perceptions of potency and performance. These snapshots support the discussion of company results. Each section of the company discussion is discussed below. Example 3 presents a model of the team snapshot and is referenced when appropriate.

The company profile is the first element of the company discussion and provides background information with respect to type (manufacturing or service) and size of operations. It also provides history relating to when teams were established and any

other organizational-level information that provides insight into the operations. This information was obtained during discussions with managers and team members.

EXAMPLE 3

COMPANY – TEAM SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:
STAGE:
NUMBER OF SURVEYS:
AVERAGE MONTHS ON TEAM:

A

EDUCATION LEVEL:

High School
Some College
Bachelor's Degree
Advanced Degree
Other

B

SUPPORT SYSTEM DEFFICIENCY:

Rewards	
Communications	
Design/Measurement	
Training	

E

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members		
Managers		

D

MEETING FREQUENCY:

Daily
1 time per week
2 or more times per week
1 or 2 times per month

C

QUESTION: How would you describe the purpose/mission of your team?

Manager:
► x

Members:
► x

E

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

COMPANY – TEAM SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	G	Quality	'M'
Quantity		Cost Control	
Customer Satisfaction		Speed	

List other performance measures used by your team:

Manager:
► x

H

Members:
► x

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES NO I

If yes, what are they?

Manager:
► x

J

Members:
► x

TEAM EFFECTIVENESS FACTOR (T.E.F.):

Benefits / Cost = T.E.F.
$xx,xxx / $y,yyy = zz.z

K

The descriptive information section (Example 3) summarizes key data for each company by drawing on details in the associated appendix. This information includes the number and type of teams participating and total number of team members. Level of education and meeting frequency are also summarized. Part 1 of Example 3 contains descriptive information, the level of education and meeting frequency. These sections

are highlighted as Parts A, B and C. Also provided on this first page of the team snapshot are the support systems' deficiencies (gap scores) labeled Part E. Team members and managers perceptions' of potency and performance are found in Part D. In many cases these data add explanatory value to the overall interpretation of the team, as well as tying the first part of this study to the discussion.

The operational measures in Part 2 of Example 3 summarize information provided by team members with regard to performance measures (Parts G and H). Team members were asked to circle one or more general categories of measurements used to gauge their team's performance. The number by the measure indicates how many team members selected that measure. In addition to the number of team members, many of these measures also have an M. This designation means that the team manager selected that measure. Options include cycle time, quality, quantity, cost control, customer satisfaction and speed. In addition, an open-ended question asked team members to list other performance measures used by their team. These responses are listed in Part H of Example 3.

The financial measures section provides summary information for two questions. First, team members were asked whether any of the team's metrics involved financial measures. If so, they were asked to list these measures. Again, the number indicates the number of team members answering "yes" or "no". Parts I and J of Example 3 summarize this information.

Part K of Example 3 contains the Team Effectiveness Factor section, summarizing calculations for projects where companies provided project savings sheets.

Overall, the five companies participating in this part of the study were only marginally successful in providing the necessary project savings information. Possible reasons for this are discussed both in the company summaries.

In Example 3, Parts E and F on Part 1 of the team snapshot solicited open comments about the team's purpose and teamwork in general. Comments from all team members are included. This information is referenced during the company discussion as appropriate. The company summary section gives an overview of the results, highlighting key information.

Company A

Company Profile

Company A is a multinational service company providing property tax reporting to mortgage companies and homeowners. Until four years ago, this division had 25 field offices and one home office. The field offices' responsibilities were divided by geographic territory and were autonomous with regard to the processes and services they performed. Four years ago, the division reorganized into 7 field offices, each with broader geographic coverage. At the same time, many routine processing activities were reassigned to the home office, leaving the field sites as the primary client contact and data collection point. Shortly after this reorganization, teams were established to handle the increased workload resulting from the work reassignment. Detailed information for Company A is found in Appendix H.

Descriptive Information

Four sites participated in this study: the home office and three field offices. Teams 1 and 2 are from field office 1; teams 3, 4 and 5 are from field office 2; teams 6 through 10 are from field office 3; and teams 11 through 15 are from the home office. In total, 85 team members from 15 teams participated in this study. Three teams have been together longer than three years, while the remaining 12 teams have worked together between 1 and 2.5 years. The 15 teams include 13 work teams and 2 parallel teams.

The company summary sheet in Appendix H shows that seven teams perceive themselves as real teams (Stage 4,) and 5 teams consider themselves high performance teams (Stage 5). Two of the teams are pseudo-teams stage 2) while 1 team is a potential team (Stage 3). Twelve of the 15 teams rate themselves as highly developed teams. This is also reflected in their potency scores, averaging 4.41 across all teams, with a high of 4.85 and a low score of 3.74.

Operational Measures

Quality (91%), cycle time (85%), and customer satisfaction (85%) are most frequently indicated as operational measures. Quantity (74%) and speed (70%) are next, with cost control (37%) listed most infrequently. This is consistent with interview comments that they almost never see any financial or cost-related numbers. Other operational measures listed include accuracy, overtime, avoiding penalties and late payments, scheduling, attention to detail, keeping up with all incoming checks, self-evaluations and communication.

All team managers chose quality and customer satisfaction (100%). These were also the teams' two highest, with 91% and 85%, respectively. The fewest managers chose cost control (64%) and speed (64%). Cost control was also the most infrequent among teams as well, at 37%.

Financial Measures

Financial measures were recognized by 40% of team members and 50% of the managers. This is consistent with the low frequency of cost control measures as well as team member comments. Avoiding penalties and late payments and various suggestions for cost improvements were mentioned as financial measures.

Team Effectiveness Factor

The vice-president of U.S. operations wanted to participate in the calculation of savings on a test basis. His instructions to the site managers was to select examples of projects rather than trying to capture everything. Two of the four sites calculated project savings.

The home office work team A13 provided information regarding a process change that added efficiencies to the Tax ID update workflow. The estimated benefits totaled $5,864 and consisted of savings in both regular work and overtime hours. The cost to implement the change was $329. The factor is calculated by dividing benefits over cost. In this case, $5,864 / $329 equals 17.8.

A field office parallel team (team A1) reported a project creating an Access database to assist in providing information to customers. Savings are estimated to be $68,144, consisting of labor, savings in duplicate billings, paper and toner. Costs to

maintain the system are estimated to be $5,250. The TEF calculates as 12.9 ($68,144 / $5,250).

Summary

Two sites in this service company struggled with defining project savings. This is in large part due to the nature of their tasks and low exposure to the financial effect of changes in process. As an office environment with considerable customer contact, measures focus on throughputs, quality and customer satisfaction. It is encouraging, however, that three projects were identified in this office environment. The low number of projects is explained by the selective testing approach used to identify projects.

The second page of the company A summary sorts the same information by team potency. There appears to be a correlation with high potency and highly developed teams since the four teams with the highest potency score also consider themselves high performing teams (Stage 5). Another observation is that the two teams with TEF measures also have gap scores in the lower third of the teams (0.11 and 0.34). The final observation is that the team with the highest TEF (17.8) also agreed 100% that they are measured with all six operational measures. This suggests that performance measures are well established and may contribute to their quantifiable outcomes.

Company B

Company Profile

Company B is a high-paced, rapidly changing service company for the banking industry. The company provides the information services linking customers with the bank in the form of nine service lines. One of the key players in the original formation of teams explained in an interview that the main reason for reorganizing into teams was to give customers the perception of a seamless organization. In other words, the nine separate lines would appear to customers to integrate into one. To facilitate this, their largest customer is an integral part of most teams. Most of the team meetings use technology (speakerphones or videoconferencing) to incorporate the customer members.

The fast-paced environment at this firm made it difficult to gather teams for participation in the survey collection. Data collection meetings were often rescheduled due to "fire-fighting." At the time of data collection, the responsibility for team system development was transferring to the human resources department. There was no clear champion for the project efforts. As a result, onsite enthusiasm for following through with teams was low. Due to the low probability of follow up after the onsite data collection visit, it was decided not to pursue the financial information. Appendix I contains the company summary sheet and team snapshots.

Descriptive Information

Participation included 8 teams, comprised of 53 team members. Table 2 indicates that the teams are equally divided into work and parallel teams (see Appendix B). Additionally, 5 of the 8 teams consider themselves "real" teams (Stage 4), with one team perceiving themselves in Stage 5 as a high performance team. Forty-one percent of the team members have bachelors' degrees, while 4% have advanced degrees, and 9% have an undetermined degree.

Reviewing the Company Summary Table in Appendix I shows that none of the teams perceive large deficiencies in support systems. This is illustrated by the low gap score on the summary sheet (0.26) and is consistent with each team's snapshot sheet. There appears to be no major concern with any of the four support systems by any team. Written comments are positive, with only one comment expressing concern that functional responsibilities inhibit his participation on the team. Team member satisfaction can be gleaned from several comments:

> Team 8 comment: "The . . . team is effective. Also, it improves the company as an infrastructure resulting in improved sales and service for our clients."
>
> Team 8 comment: "We have a really great team! Team members are dedicated and we discuss everything openly. The . . . team is one of the best teams ever I have been a member of."
>
> Team 6 comment: "Our team works well together, regardless of the company recognition."

Team 5 comment: "This is an excellent team. There is information sharing, and strong work ethic. It's a team you can feel comfortable learning and developing in."

Some team comments suggest weaknesses or improvement opportunities. These comments use "non-negative" language, suggesting practice at framing teaming issues in a productive fashion. Examples include:

Team 3 comment: "Our team members have functional accountabilities that prevent total commitment to team efforts. (My own commitment is only 5% of my available time). This dichotomy is the most significant weakness of our team."

Team 6 comment: "Goals need to be realistic and attainable. Long-term goals should be metered gradually."

Team 6 comment: "I would question the quantity of work produced and its relative value to the organization. I am personally frustrated due to our lack of speed at making the necessary changes to move the organization forward."

Operational Measures

The two leading metrics used with the teams are quality and customer satisfaction (85% and 83%). The other four measures were selected infrequently (cycle time, 38%; quantity, 34%; cost control, 36%; speed, 34%). With the exception of team 8, at least 90% of team members agreed with quality and/or customer satisfaction as a measure of their performance.

Three managers did not respond to the survey. The remaining five managers all listed customer satisfaction (100%), and none listed cost control, quantity or cycle time. Adjusting the number of teams to include only those whose manager participated shows quality and customer satisfaction as the most frequent choices (80% and 100%).

Open-ended responses included items such as problem resolving, incident management, improving themselves, working well together, company values, commitment, knowledge, moral understanding and coworker tolerance. Examples of financial measures included in this category were increased revenue, financial effectiveness and profit. Overall, the inclusion of intangible outcomes as measures suggests a lack of formal measures. However, items listed also suggest a firm understanding of what it takes to make a successful team.

Financial Measures

Financial measures were selected an average of 42% of the time by team members. However, teams ranged broadly from 0% to 88%. Only one team manager indicated the use of financial measures. Team members offered the following as financial measures: always be cost effective, look for ways to reduce waste and cost, cost/benefit, cut the cost of overtime, increased revenue, under budget, and unit costs.

Team Effectiveness Factor

The TEF was not calculated for participating teams in this company.

Summary

Teams participating in this project work in a highly stressful, fast-paced corporate environment. Although team development leadership is changing, the teams appear to

maintain high morale and to have clear sense of purpose. Solid agreement between teams and managers with regard to operational measures also suggests that they are aligned with a larger company mission.

This evaluation is made with caution, however. There is the possibility that the participants who took the time to complete the survey are those who already recognize that their team is important. Team members who may not fully accept the teaming process may not have valued the exercise enough to take the time for the survey. This could potentially lead to a positive bias in the results and comments.

Company C

Company Profile

Company C is a manufacturing facility that also does research and design engineering. Five of the seven participating teams are product development teams, and the remaining two teams are improvement teams. All teams are comprised of engineers and technical personnel, 42% of whom hold advanced degrees. The teams have been together for one to two years and have had no team training, and no formal support systems are in place (i.e., performance measures, rewards, etc.). Significant gap scores exist for four of the teams, as shown in Appendix J.

This company is planning a teaming initiative in the near future and was interested in this study to baseline the team members' attitudes and opinions. For this reason, management chose not to participate in the project savings portion of the study.

Descriptive Information

Four of the seven teams consider themselves as pseudo-teams (Stage 2). This is reasonable considering the short period of time that the teams have been meeting. Another factor contributing to the low stage of development could be the lack of training as a team. Most teams meet one or more times each week, with team 1 meeting one or two times per month.

Discussions with both teams and managers revealed two major sources of problems. One is the conflict that arises when team members have responsibilities in both their functional area and their cross-functional team. Time restrictions and deficiencies in support for their teaming efforts by their functional manager lead many of the team members to focus on their functional responsibilities, often slighting their team efforts.

Another source of concern among teams is the difficulty in obtaining information both across teams and departments and across levels of management. There is concern over a lack of clear direction.

Operational Measures

The summary sheet in Appendix I summarizes the operational measures selected by the team. Quality (72%) and customer satisfaction (67%) were most frequently indicated as team measures. Following closely were cost control (61%) and speed (58%). Cycle time (36%) and quantity (11%) were listed the fewest number of times. These results are consistent with the expectations from product development and cost improvement teams. Other measures offered by team members include effectiveness,

reliability, number of service calls each year, standard cost, completing goals on time, product performance, staying late, working weekends and innovation.

All seven managers responded to the survey. One hundred percent agreed that the team uses quality measures. This agrees with team responses as the highest operational metric. Six of the seven managers chose cost control, customer satisfaction and speed. These were the three lowest of the team members' selections. Team 1 listed 2 measures – cycle time (100%) and customer satisfaction (33%). The manager for this team not only did not choose these, but also chose four measures that no team member had selected. These measures include quality, cost control, speed and financial. Team 4 showed similar differences from their team manager. All team members selected quality, cost control and speed as measures. The only one of these measures the manager selected was quality.

Prior discussion in the company profile section revealed that there are no formal support systems in place at this time. This explains the disparity in team member and manager responses. In the absence of defined team measures, team member responses may reflect functional area influences and measures previously used for the task prior to formation of formal teams.

Team Effectiveness Factor

Managers chose not to participate at this time in the calculation of project savings. However, many respondents provided other financial measures. Sixty-seven percent of team members acknowledged that they consider financial measures such as raw material and labor cost, purchase price reduction, cost of quality, cost reduction, ROI, NPV,

increased revenue, meeting budget and capital cost of new equipment. All of these measures are product cost and performance oriented and are expected of product development teams. Six out of seven managers indicated that financial measures exist.

Summary

Company C has formed teams recently, but it has not provided training and support at this time. Teams report turmoil with direction and conflicting responsibilities. The Gap indices found on the team snapshots for training and Design and Measurement Systems and the average on the summary sheet support these comments. Five teams recognized the Rewards System as having considerable deficiencies, with five teams over (1.0), with the highest at 2.06. One possible explanation could be that being tied to product development closely links their efforts with product performance. Access to the financial effects of those products can raise recognition and rewards expectations. Another potential explanation revolves around the longitudinal nature of their task. A new product development cycle may be from 18 to 36 months. The infrequency of outcome measures may make these final measures more important to the team members as a way of communicating their accomplishments.

Page 2 of the Company C Summary sorts the table by team potency (see Appendix I). The support systems gap measure is inversely related to team potency. In other words, the lowest gap score is for the team with the highest potency rating. The highest gap score is for the team with the lowest potency score.

Company D

Company Profile

Company D is a manufacturing facility with a multinational company and employs approximately 220 people. Participating in the project were 11 work teams, comprised of 49 team members from operations, including production and technical teams.

Descriptive Information

This facility has been working in teams of some form for many years. Team maturity ranked in the last three stages of development -- potential teams (3 teams), real teams (5 teams), and high performance teams (3 teams). Membership on teams ranged from 10.2 months to 84 months (7 years), averaging approximately three years. The highest level of education for 25% of the participants is a high school diploma. Another 46% have attended some college, and an additional 17% hold their bachelors degree.

Open-ended comments are positive. Most comments relate to the value of teamwork in general and comments are not specifically directed at their team. This may suggest an overall satisfaction with their experiences. It is also noteworthy that these comments originate from a wide range of teams. Some examples of these comments are as follows:

Team 1 comment: "Makes for a good and productive work environment."

Team 2 comment: "Communication and self discipline is the key to any productive team."

Team 3 comment: "If you can't buy into it don't waste your time and others."

Team 4 comment: "Working as a team always proves positive. Not only here but in all aspects of life.

Team 5 comment: "As a team we work together to solve issues."

Team 6 comment: "The team works well together."

Team 7 comment: "Our team is solid, loyal and honest. Most of all caring about each other and feelings."

Operating Measures

The company summary sheet in Appendix K summarizes key information. Quality (94%), quantity (92%) and speed (80%) were most frequently selected by team members. Customer satisfaction (61%) and cost control (59%) were similarly chosen, with cycle time (49%) as the most infrequent. There is a high level of agreement among team members indicated by the number of '100%' in the table. Twenty-nine of 77 measures (7 measures x 11 teams), or 38%, agreed 100% on the measures used for the team. Other measures offered by team members were operating efficiency, job satisfaction, safety, cost per case, asset utilization, team development, housekeeping, change over time, attendance, pounds per shift, tank inventory, downtime and number of accidents.

Team members and managers concurred on the two highest measures. Team members chose quality (94%) and quantity (92%), while 80% of managers chose both. In addition, team members and managers agreed with the least used measure. Cycle time was chosen 49% of the time by team members and 30% of the team managers.

Financial Measures

Sixty-two percent of the team members and 50% of team managers noted that financial measures were used to gauge their performance. The most common measures mentioned were asset utilization and cost per case. Other financial measures include operating efficiencies, cost savings, overtime charges and blend back ratios. Several team members mentioned many of these same measures, indicating the presence of a common measurement system.

Team Effectiveness Factor

Two teams reported three projects. Project 1 was recommended and implemented by team 1 and estimates an annualized savings of $95,454. The majority of the savings sourced from the elimination of temporary labor and a reduction in downtime. There is no cost required to implement or maintain this project. Therefore, the maximum TEF of 20.0 is used for this team.

Team 5 reports two projects. The first involves the installation of a photo eye on an automated line that results in lower scrap and downtime. Projected annualized savings amount to $107,166, with a cost of $1,000 for the additional equipment. The second project recommended scheduling enhancements that would eliminate excess capacity on the high-speed line. Savings are estimated at $292,467, considering the 2001 forecast. Additional piping would be required having a five-year life at a cost of $93,000.

Calculating the TEF for team 5 is illustrated below:

Annualized Benefit / Annualized Cost = TEF

($107,166 + $292,467) / ($1,000 + $18,600) = 20.4 (maximum 20.0)

The plant controller, using improvement suggestions from the last year, calculated savings sheets. It is likely that there is considerable loss of information on what projects the teams undertook or recommendations made. This company appears to have many measures in place as well as a cost improvement suggestion program. It would be reasonable to expect many projects to be included in this study. One potential explanation for the low number of projects would be the low priority of this task for the plant controller.

Summary

The teaming concept has existed in Company D's environment for several years. The team members have had an opportunity to develop their processes and define their roles. Teams report relatively high potency scores, with all 11 teams scoring 3.9 or above on a 5-point scale and with 8 scoring above 4.0. This information, combined with their positive comments and the team members' agreement about their measures, suggests that they are clear with regard to their goals and purpose.

When the table is sorted by team potency (Appendix K, p 2 of the company summary), the first three teams are those that consider themselves high-performing teams. In addition, the first and fourth teams report the maximum TEF of 20.0. Managers also rate the first two teams as having the highest performance (5.0), and the team with the lowest potency score also has the lowest manager performance rating.

Company E

Company Profile

Company E is a manufacturing facility with approximately 160 employees. It began as a greenfield site for a multinational company in 1991. At the time of data collection, the plant ran a five-day, 24-hour work schedule. The data collection visit was purposely scheduled just prior to the announcement of the transition to a seven-day operation. It is possible that participants may have been aware of the pending announcement. This seven-day schedule is not new to the facility, however; it previously worked that schedule several years ago.

When teams were first established, there was enthusiasm at the prospect of self-management, with many teams wanting responsibilities for hiring and other key administrative duties. Plant leadership avoided this level of empowerment and structured team leaders to bear more of the responsibility for the teams. This reversal in supervision has left negative feelings among many team members.

This facility uses a "team learning" matrix designed to monitor the teams' progress in mastering their tasks. There are five stages horizontally and five to six activities vertically on the matrix. Each stage for each task has defined characteristics indicative of that stage's level of mastery of the activity. A team may be considered a

Stage 2 in one task and also be rated at Stage 4 in another. Teams are aware of the matrix and where they are rated on the scales.

The plant manager explained in an interview that the team leader adjusts his/her supervisory style depending on the stage for that activity. On activities in which the team is rated in the later stages of development, the leader allows more self-management. In the activities in which the team rates in the lower stages, the leader is expected to exert more control over the team tasks.

It may be difficult for managers to modify the level of control over various team processes and tasks. Comments from team members suggest that there is a tendency for leaders to maintain the greater level of control over all tasks. The following four comments are similar to many offered by all the teams:

> Team 1 comment: "The teams work fine but the leadership is a hindrance."
>
> Team 1 comment: "It is difficult to have an [high-performing work system] environment when many 'leaders' are traditional and rigid in their processes."
>
> Team 3 comment: "Our culture here is clearly divided. The technicians are expected to act as 'team members' but the leaders are expected to act as traditional 'managers' due to the corporate culture."
>
> Team 5 comment: "The company wants it to be self managing but they insist on managing their way without flexibility. My team leader wants to be god."

In addition to transitioning to a seven-day schedule, the plant volume is expected to double over the next 12 months. The plant's goal is a 30% productivity increase. This environment makes it more difficult for team leaders to relinquish their authority.

Descriptive Information

Thirty-six team members from five operations' teams participated in the study. Four of these teams are work teams, while the fifth is a parallel team. Teams rated themselves across three stages of maturity: one as a pseudo-team (Stage 2); two as potential teams (Stage 3), and two as real teams (Stage 4).

Team members average 4.5 years on their team. The range of membership is from 3.5 years to 6.5 years. Two comments from team members refer to the way "it used to be when they started teams." This suggests that, although the teaming environment has been in place since the plant started, it has undergone considerable change.

Only two team members have a college degree, while 22 (60%) have some college experience. The remaining 12 (33%) hold a high school diploma. Most team members agreed that they meet frequently -- either daily or weekly.

The company summary sheet in Appendix L summarizes key information on these teams. Panel B of this summary sheet sorts this information according to the team potency scores. This highlights the inverse relationship with support system gap scores. As team potency decreases, the support system deficiencies as perceived by the team increase. Review of the individual team snapshots indicates that the Rewards System and the Design and Measurement System are perceived to have the greater deficiencies.

Operational Measures

Four operational measures were selected most frequently: quantity (72%); customer satisfaction (67%); cost control (61%); and speed (58%). Two infrequent measures were cycle time (36%) and quantity (11%). Other measures offered by team

members were sanitation, safety, schedule attainment, asset utilization, downtime, cost per pound, lost-time accidents, meeting deadlines, preventive maintenance, flexibility and yield. Asset utilization was mentioned by more team members than other measures.

Financial Measures

Of the 36 team members, 67% acknowledged the use of a financial measure. It is noteworthy that there was 100% agreement on three of the five teams that they use financial measures. These include cost per pound, scrap, throughput rate, capital dollars, product yield, cost analysis and budget attainment. The team manager for one of those teams, however, did not concur and indicated that no financial measures are used by the team.

Team Effectiveness Measures

The teams' system coordinator and the plant controller attempted to generate the project savings sheets. They were unable to do so. Considerations included both time restrictions on their part and, perhaps, insufficient understanding of the task. Communication with the coordinator included this comment, "It's difficult to isolate projects. We are really just one big project." This statement makes additional pursuit of project savings fruitless at this time.

Summary

Company E is a manufacturing facility whose teaming system has been in place since startup. Although the teams have had several years together, they believe rigid team leaders and corporate philosophy hinder them. This facility is on the brink of large increases in demand for both production volume and worker productivity.

The most probable reason why this company could not accumulate project savings information is the lack of available time to devote to the task at this time. The operational changes taking place during this time period absorbed the leadership's time and focus, hindering efforts to collect this information.

Company F

Company Profile

Company F is a manufacturing facility that has been involved with the teaming concept since the advent of quality circles in the early 1980s. Most teams revolve around specific work processes that are part of a larger production stream. They have a well-defined performance system, containing both measures and providing a regular forum to communicate with management.

There are 20 total teams divided equally between operations and support. Operations teams conduct quarterly review meetings with management, while support teams' reviews are semi-annual. Prior to each review, the leadership team circulates a memo to the teams outlining the topics to be covered in their review. Topics vary slightly between review meetings, but they are the same for all teams. These may include performance measures, obstacles, resource requirements, recommendations and goals for the next quarter. Each team has the freedom to develop its own presentation format and include additional topics of interest. Each review is structured to allow 15 minutes for the team presentation, 5 minutes for questions and 5 minutes for feedback. Ground rules are in place to insure both efficiency and a comfortable environment.

For the review, each team is assigned a reviewer from the leadership team. This reviewer is responsible for verbal feedback at the review as well as written feedback to the team within one week. He/she is also required to meet with the team to relay the leadership team's comments.

Researcher observations of these review meetings suggest a comfortable atmosphere conducive to information exchange. Comments from the leadership team were positive and showed concern for team needs. The following quotations from this review meeting illustrate this point:

Leader 1: "Is the training you reported sufficient for your needs?"

Leader 2: "We [leadership team] will tackle any obstacle for the team if you let us know what that obstacle is."

Descriptive Information

Participating in this study were 62 team members from 11 teams, all of which are from operations and are categorized as work teams. Teams perceive themselves in the last three stages of development: 5 as potential teams (Stage 3); 4 as real teams (Stage 4); and 2 as high performance teams (Stage 5).

The level of education varies, with 20% holding high school degrees, 60% having some college experience and 20% holding college degrees. Average tenure on these teams varies widely from less than 1 year to 7.5 years, averaging 3.5 years. Eight of the 11 teams agreed that they meet one or more times per week.

Operational Measures

Quality is the overriding measure chosen by 98% of participants. Customer satisfaction and cycle time were next, with 81%. Team members reported the remaining measures as follows: cost control (68%), quantity (60%) and speed (47%). Other measures mentioned by team members include on-time delivery, starpoint execution, cross training, customer feedback, six sigma, statistical process control (SPC), operating performance measures (OPM), quality audits and safety.

Although all managers participated in the study, 3 did not respond to this part of the survey. Because the reason for this omission is unknown, their lack of response is interpreted to mean that these are not measures used by the team. Seven of the 8 managers responding selected cycle time and quality, while 4 managers chose quantity and speed. Team members responded similarly, with quality and cycle time with the highest percent of team members and with quantity and speed as the lowest. This high level of agreement indicates the presence of clearly defined goals and measures.

Financial Measures

Sixty-five percent of participants concurred they use financial measures. All members on two teams agreed. Measures mentioned include percent overhead, percent availability, cost avoidance, hours per unit, labor savings, cycle time reduction and cost savings. Cost savings was mentioned most frequently. Six of the 8 responding managers indicated that the team used financial measures.

Team Effectiveness Factor

This company reported four projects. Team F4 reported labor and cycle time savings on a two-year contract of $600,000. This required an investment of $600,00 in

equipment. Costs and benefits were allocated over the contract period. The TEF is calculated as 7.5 ($300,000/40,000).

Team F5 revised a manual taping process by using drink cozies instead of hand masking tape, dramatically reducing the amount of preparation time per unit. This change in process saves 20 labor hours per run and costs approximately $0.50 per unit. The TEF is estimated at 10.0 for 7,600 units ($38,000/$3,800).

Team F7 reported $49,000 savings by rearranging the workstations into a continuous-flow manufacturing cell with no additional costs. The TEF in this situation is set at the maximum of 20.0.

The high-performance team coordinator accumulated these savings by reviewing the teams' quarterly review reports to management. He commented that he could devise more projects if needed. This highlights once again the tendency for company personnel to weigh the time investment with participation in the study. It also suggests loss of information. This is particularly clear since the most frequent financial measure mentioned by team members was "cost savings." This is the ideal condition for documenting the project savings sheets.

Summary

Company F is a mature team system that has developed a strong system of internal measures and reporting. The leadership team makes a conscious effort to identify and provide resources to the teams. Overall, the support system gap scores support this, with the Rewards System having the higher of the gap scores on the team snapshots.

Sorting information by team potency shows that the five teams with the highest potency scores are also those in "real teams" and "high-performance teams" categories. These are not, however, the teams generating the TEF. The three teams with projects savings have potency scores in the lower 50% of the teams. This reflects the team coordinator's intention to select example projects and may not fairly reflect team performance.

Company G

Company Profile

Company G is a manufacturing facility having approximately 110 employees, 82% of whom participated in this study. A major multinational corporation purchased this facility from a small operator three or four years ago. Three members of the leadership team were replaced with managers from the new owners. The decision to become a team-based organization was made shortly after this transition. All employees were reorganized into teams.

This plant operates as a 24-hour, 7-day-a-week operation. Shift supervisors were reassigned as members of a technical support team whose purpose is trouble-shooting. Administrative duties, such as scheduling, were transferred to the production teams. Interviews indicate that this has been a difficult transition. Extensive training has facilitated this trouble-shooting team into redefining its role in the organization and members' relationships to other employees.

Two full-time trainers monitor the teams regularly. At the time of this study, all teams had completed 4 of 10 training modules. This training has included both interpersonal skills and meeting management. The dedicated resource (trainers) is reflected in the overall low training gap scores. Both of these trainers have been at this facility more than 10 years and have held various positions.

Descriptive Information

This is a new team system, with teams averaging 10 months together. Most teams rate their team as potential teams (Stage 3 - 6 teams), while 3 teams are pseudo-teams (Stage 2), and the remaining 2 teams are work groups (Stage 1). Ten of the 11 teams are work teams, and 1 is a project team.

The four production teams and the maintenance support team indicated during discussions that it is business as usual. Generally, most members of these teams felt that they did not perform their jobs differently since becoming a team. Miscellaneous comments on the surveys for these five teams (#1, #8, #9, #10, #11) indicate the reluctance of some team members. Three examples of these comments are as follows:

> Team 1 comment: "Most team members work together with a common goal. However, there are a couple of members who work against all attempts to work as a unit."
>
> Team 1 comment: "It is hard to rate a team effectively when you don't feel as if everyone on the team is performing their part. Some are team players that you can rate, and others are not team players and you can't rate. It is not fair to judge a team by including people who are not players."

Team 11 comment: "I'm having trouble seeing where the team starts. We (I) feel we were just as efficient before it all began."

See Appendix N, teams 1, 8, 9, 10 and 11 for more comments.

Four of these five teams meet once or twice a month, while the other six teams meet once or twice a week. The infrequency of these meetings may hinder the members' identification as a team.

Operational Measures

The company summary shows the percentage of team members who selected each category (see Appendix N). Response results, in descending order, are quality (78%), customer satisfaction (67%), cost control (57%), quantity (39%), speed (25%) and cycle time (16%). Other open-ended responses included attitudes, work relations, safety, environment, scorecard, health, safety and environmental audits, precision, self-satisfaction and happiness of the boss.

Team Effectiveness Factor

Three projects were reported for two teams. Team 2 is a parallel team whose project savings amount to $1,145,050. Team 5 is a work team for which two projects amount to $69,600. All three of these project recommendations resulted from changes in processes and did not require any additional investment to implement. As a result, the denominator in the TEF formula would be zero (benefits / cost = TEF). A maximum of 20.0 is used as the TEF for projects that have no investment or ongoing operating costs.

In Appendix N the teams' summary is sorted by team potency score. The two highest potency scores are the two teams with project savings. It is possible that these definable successes contribute to the teams' belief in their ability to succeed.

The team trainers accumulated the project savings worksheets. The leadership team was reluctant to present the teams with this task at such an early point in their development. It is probable that projects went unreported for two reasons. The first is that the worksheet was completed for the prior 12 months, and it is likely that some projects have simply been lost. The second reason is that the team is the best judge of what it recommends and does on a regular basis. The optimum time for data collection is at the date of completion by the team.

Another indication that there may be unreported project savings comes from the responses to the question that asks what financial measures are applied to their team. Teams 2, 3, 4, 5, 6, 8, and 9 reported financial metrics. These included various types of cost savings, increased revenue, "chop" (cost of heavy olefin feed production), environmental cost savings, power conversation, recycling and freight cost. Each of these measures could potentially be translated into project savings.

Summary. Company G is a newly formed team-based organization that is still struggling to redefine many roles. Not all teams have a clear understanding of their mission, and formal team performance measures are not in place at this time. The production teams appear to be more insecure than other teams. This may be due to their need for specific direction as a team and infrequent meetings.

Research Question 4

Data Results

The fourth research question explores the use of a calculated financial metric (TEF) to evaluate team performance and whether this metric is related to perceptual measures of performance. Five companies with 53 total teams provided data for 9 teams (10 projects). This represents 17% of the participating teams. This small sample may bias interpretation. Possible reasons for the low number of projects are discussed in the next section.

Table 26 presents the projects and team effectiveness factor for each of these teams (see Appendix B). Four projects represented changes in processes and required no investment to implement or maintain the project. A maximum factor of 20.0 was used for these teams. Actual calculated factors ranged from 7.5 to 20.4. Team potency and perceptions of performance are also included in Table 26 for reference.

Teams incur costs whenever they meet. These costs include meeting time, facility costs and perhaps even opportunity costs. There are sunk costs such as training, consultants and materials. These costs are incurred to develop and maintain the team system and are not specific to one particular process change or project solution. In other words, these are the costs to implement and maintain support systems, and they apply to all teams. These types of support system costs are not considered when calculating the TEF.

Table 27 presents correlations on this small sample of 9 teams among the TEF, team potency, and both team and manager perceptions of performance (see Appendix B). The TEF is most highly correlated with manager perception of performance (r=0.563; p=0.115) and least correlated with the team perception of performance (r=0.125; p=0.749). This is a reasonable result because, in most cases, managers selected the projects used in the study. It is reasonable to assume that successful projects influence managers' perceptions of team performance. Team managers would look primarily at the teams they consider successful when selecting projects for the study.

Data Collection Process

The source and timing of the project savings sheets is key to obtaining data that reliably reflect team performance. Ideally, the team itself would complete the project savings sheets, with relevant cost information provided by the accounting function. These sheets would also be completed at the time the team recommends its solution as a normal part of its reporting to management. As the team completes its analysis of the activity or process, team members are aware of the resources saved and consumed by the old and new process. As time elapses from the time the recommendation is made, more information regarding the change is lost.

Additionally, this information should be collected over a lengthy period before the factor can be objectively evaluated. Depending on the team and the task, it may take 2 to 18 months to complete analysis and make a recommendation on a single project. Monitoring teams' progress over a longer period (2 or more years) is required to discern whether teams are performing or stagnating.

In this study, none of the teams accumulated their own project savings sheets. There are several reasons for this. First, some companies were concerned about the complexity of the task and the time it would take the team. To assess their projects reliably would require instruction, extending the time investment further. The teams may be overwhelmed with the task because most teams are unfamiliar with it, and many do not normally consider financial information in their analyses.

A conscious decision was made by three companies to try the TEF out on a select number of teams and projects to first assess the measure's value before investing more effort and resources in the task. This was more easily and economically accomplished by a manager familiar with the team rather than involving the entire team.

Measuring performance is usually a sensitive area. The last reason that the teams failed to accumulate the information is that management did not want to cause undue stress for the teams with a measure that they may or may not choose to implement in the long run.

For these reasons, team managers and teaming coordinators completed the project savings sheets for the preceding 12 months. Completion in retrospect by a source outside the team resulted in missing projects and loss of information (resources saved and expended). The short 12-month period also did not allow for completion of projects by all teams.

In summary, the main goal of this part of the field study was not accomplished due to the low number of identified projects. The source and timing of the actual data collection process hindered the collection and reliability of project results. This

contributes to the low number of TEFs. This also explains the higher correlation of the TEF with manager perception of performance ($\underline{r}$=0.563) than with team perception of performance ($\underline{r}$=0.125). Managers have a mental model of team performance that is revealed in the survey questions. This model may have a tendency to influence where they look for quantifiable project results.

The low number of projects identified by the companies is due to limitations imposed by the data collection process and does not mean that the TEF is an ineffective measure. Different types of teams in different industries were able to use this process to quantify process improvements and project solutions. Further investigation is required before the metric can be fully evaluated as a financial performance measure.

Research Question 5

The fifth research question sought information from the companies on what financial measures were used to gauge team performance. Table 28 summarizes both the operational and financial measures team members selected as measures used to gauge their team's performance (see Appendix B).

The category most frequently selected by team members from all seven companies was quality. It was ranked first by all companies except one and that company ranked it second. Frequencies range from 72% to 100% of team members.

Table 29 organizes and ranks the frequencies by industry (see Appendix B). Quality and customer service are ranked first and second by team members in both service and manufacturing industries. Quality's frequency in the service industry is 90%, and manufacturing is 83%. Customer services' frequencies are 88% and 66%,

respectively. Both reflect an emphasis on these measures in the service arena over the manufacturing sector.

Although there are differences across companies, there are distinct differences and similarities between two industries. These differences are highlighted in Table 29 with connecting arrows. Three categories of measures differ between the service and manufacturing industries. These measures are cycle, cost and financial. The service industry ranked cycle as third with 70%, while it was the most infrequent selection in the manufacturing industry, with 40%. The high frequency in the service arena was expected due to the nature of the business in the sample, which involves banking and property tax statements.

The cost and financial categories ranked closely together in both industries. In the manufacturing industry, the two measures tied for third, with 62% of the team members. This is reasonable considering that for many years cost reduction was a focus of manufacturing. The cost and financial categories ranked last in the service industry, with frequencies of 43% and 40%, respectively. This is consistent with comments from team members in the sample that they are not exposed to financial information.

The cost measure was presented as an option in the operational measurement section, while the financial measure question was presented separately. This may have caused some confusion in the respondents. It is reasonable that team members selected both measures.

Quantity and speed measures were similarly selected in both industries, ranking fourth and fifth in each. For both measures, the frequencies were higher for the service

industry. The quantity measure was chosen by 62% of the team members in the service industry and 55% of those in manufacturing. Speed was selected 59% of the time by service industry team members and 51% of the teams by those in manufacturing.

Manufacturing teams ranked quantity, speed and cycle time as the three most infrequently used measures. This may reflect the shifting emphasis from mass manufacturing (volume oriented) to lean manufacturing (quality and process oriented). It is possible that these measures may have ranked higher15 years ago.

The open-ended comments for both operational and financial measures included quantifiable measures (i.e., cost savings, increased revenue, asset utilization) and intangible outcomes (i.e., attitude, morale, teamwork). This suggests that many of the participating companies have no defined performance measures for teams. In this case, the team members' selections may reflect organizational measures and, in many cases, expectations of teamwork.

In summary, the most frequently used measures for both industries are quality and customer service. Industries differ, however, in their use of financial measures (cost, financial), with the manufacturing industry using these measures more frequently than the service industry.

CHAPTER 6

CONCLUSIONS

Discussion of Results

The purpose of this research is to investigate potential drivers and measures of team performance. Learning more about the predictors of performance will enable companies to make wiser use of scarce resources.

The first research question examines whether teams view support systems differently. Are some support systems more important than others? Results for Hypothesis 1a suggest that teams consider the Design and Measurement System and the Rewards System as more important to their success as a team than the Communications and Training Systems. This is further supported when examining the deficiency measures. It appears that teams are more sensitive to deficiencies in these two systems.

Teams in the service industry view all support systems as more important than teams in manufacturing, with the difference for the Design and Measurement System and Training System being significant. Sample limitations prohibit testing whether these differences were across different types or stages of teams. Exploring possible reasons for these differences is an opportunity for future research.

Hypothesis 1b tests team type as influencing teams perceptions of support systems. Team member perceptions appear to vary across different types of teams. However, the disproportionate number of teams included in various categories in the

sample creates concern and caution when interpreting the results. The Communication System and the Design and Measurement System appear to be more important to project and parallel teams than to work teams. The Communications System involves exchange of information between the team and suppliers, customers and management. Project and parallel teams are more likely to require this type of interaction than work teams. Work teams are involved in their processes, and their information needs from external sources may be more limited.

A perceptual difference in the Design and Measurement System is also a logical result when considering the characteristics within the construct. A large number of the items refer to the clarity of team mission, authority and feedback, and these examine whether appropriate skills are available within the team. In contrast, members of work teams originate in the same process, are comprised of similar skills and are less concerned with appropriate membership.

Hypothesis 1c analyzes whether the teams' stage of development influences their perception of support systems. Team members of teams in all five stages of development consider the Design and Measurement System to be the most important of the four support systems. Team member perceptions of the Design and Measurement System also differ across teams in different stages of development. The most developed stage, high-performance teams, has a mean considerably higher than the other four stages. This may be due to well-developed teams being more aware of the need for appropriate skills and alignment of goals and measurements. Teams in this stage perceive goals, feedback and authority as critical resources for succeeding.

The second research question examines the relationships between support systems, team potency and team performance. Hypothesis 2a addresses the influences of support systems on potency. Results from individual regressions indicate that teams' perception of both the presence and deficiency of support systems significantly influence potency. In addition, team potency is strongly correlated with team's perception of performance.

The results of a series of regressions support potency as a mediating variable between two support systems and the teams' perception of performance. Team potency mediates the effects of the Presence of the Rewards System and the Design and Measurement System. However, when deficiencies in support systems are considered, only the Design and Measurement System is mediated by potency. This is consistent with earlier discussion that teams consider the Rewards and the Design and Measurement Systems as the most important for them to succeed.

The behaviors of the systems change when the four support systems are considered simultaneously. The presence of the Design and Measurement System is still mediated by team potency, but the presence of the Rewards System is not. Mediation is not supported by deficiencies in any support system. In addition, not all parameter estimates are in the predicted direction. This possibly suggests the presence of another mediating variable. It could be, for example, that the effects of training and communications impact performance through their influence on team processes. Team processes may be another mediating variable. This finding warrants further investigation.

The influence of team potency on team performance is examined in hypothesis 2b. Analysis results support prior research, finding that team potency is positively associated with team performance.

The third research question examines team managers' perceptions of support systems and performance to determine what differences exist with team member perceptions. Results of tests for Hypothesis 3 find that team managers and team members differ in their perception of the importance of the Training and Communication Systems. Overall, it appears that team managers view these support systems as more important to team success than team members perceive them. If managers invest in what they perceive as important (Training and Communication), they may be overlooking opportunities to develop two systems (Design & Measurement and Rewards) that the teams deem important and that also have a greater impact on performance. However, managers and team members have similar perceptions of the importance of two systems that have the greatest impact on team potency and performance. These systems are the Design and Measurement System and the Rewards System.

Team members and team managers also differ in their perceptions of potency and performance. Team members tend to be more critical when evaluating their team potency and performance than team managers. Team managers' perception of team potency is significantly correlated to team perceptions of potency and performance. This unexpected result could mean that a manager's mental model of the team has a direct influence on the team's ability to succeed.

The Rewards System, the Design and Measurement System, and the managers' perception of team potency may all be categorized as forms of feedback mechanisms. The Communications System and the Training Systems are concerned with information exchange and basic skills. From this viewpoint, the teams consider feedback as key to their success in meeting team goals. This reveals opportunities to explore various forms of feedback mechanisms and their effect on team performance.

The fourth research question examined the feasibility of using the team effectiveness factor (TEF) by teams to measure their performance. The TEF was successfully employed by different types of teams in different industries on a test basis. It is difficult to evaluate this cost/benefit metric due to the low number of projects in the sample. However, it is encouraging that it was successfully used by a variety of teams and projects. Further discussion is found in the Limitations section.

The fifth research question examined financial measures used by teams in participating companies. The frequency of financial measures used to gauge team performance varies between the service and manufacturing industries. Teams in both industries recognize quality and customer service metrics as frequent performance measures. The industries have opposite views with regards to the financial and volume-based measures.

The service industry lists volume-based measures (cycle time, quantity) as more frequently used to gauge their performance than financial measures (cost control, financial). Teams in manufacturing environments list the financial measures before those that are volume-based. This finding illustrates the growing trend in the manufacturing

industry to shift away from cost-driven, volume-based mass manufacturing towards a customer focused, lean manufacturing environment.

Limitations

As a field study, results of this study are sample specific. In other words, they are not generalizable either to all companies or to team-based organizations. This is common in most field studies because many environmental variables cannot be controlled.

The low number of project and parallel (cross-functional) teams participating in the study limits the evaluation of Hypothesis 1b that examines the influence of type of team on teams' perceptions of support systems. Even though significance was found relative to two support systems, the disparate cell sizes may have masked other significant variables

Perceptions of performance are used as the dependent variable in the regression equations. Self-report bias may limit interpretation of results because both the independent and dependent variables are perceptual ratings by team members. This effect, however, is somewhat mitigated by presenting the dependent variables to the subjects before the independent variables.

Results are limited to the four support systems identified and measured in the instrument. Organizations are complex and other support systems not identified may also influence the performance of teams. Each support system construct was measured using 3 to 4 items which is the minimum number required for construct validity. A more comprehensive set of items may better measure each construct.

Participants included 68 teams and 58 team managers. Ten managers were not available to participate in the study and the mean scores of the remaining managers were used to evaluate hypothesis 3.

Limitations in the data collection process explain the reason for the low number of projects savings. Project savings were generated by sources outside the team and for duration insufficient to capture the performance of many teams. Concern about the time investment by team members and the behavioral implications of an untried measure led to management's decision not to involve the team directly in the calculation of project savings. This led to loss of information and broad estimations. This concept, however, should be pursued in future research, with modifications to the data collection process.

Implications for Organizations

Organizations either currently engaged in team practices or at the threshold of reorganizing into a team-based organization are able to incorporate several of this study's findings into their strategy. This study highlights two support systems as being critically important to the success of teams. These two systems are the Design and Measurement System and the Rewards System. This finding helps managers to target their investment into these two support systems. This is not to imply that the Training and Communications Systems are not important. However, when deciding where to channel scarce resources, this group of companies would optimize their investment by developing a Rewards System and appropriate performance measures.

A large part of the Design and Measurement System involves team membership, alignment and clarity of goals and team authority to implement their solutions. This is particularly true for project and parallel teams. Companies with many of these teams should pay close attention to developing strong group Design and Measurement Systems.

This study also heightens awareness of the role that team perception plays in team performance. Differences in manager and team perceptions illustrate the need for companies to be sensitive to the resource needs as perceived by the team.

Finally, a periodic census of teams' perceptions of support systems would enable managers to monitor the progress of support system development. This allows managers to adjust their support strategy and provide necessary resources as the teams' needs change due to changes in task, market or mission.

Implications for Research

Future research emanates from this study in two directions. One is to explore support systems more fully as predictors of performance. The other is to continue development of a financial measure of team performance.

Support Systems

This study found that industries view the support systems differently. Undergoing this study with a larger, more varied sample would enable researchers to further partition the industries into team type and stage of development. This would

provide insight into how differently teams in the various industries view individual support systems. This would provide information that would enable organizations in different industries to channel their resources appropriately.

Findings suggest that other variables may also mediate support systems' influence on team performance. Investigation into team processes, such as meeting and communication skills, may present alternative mediators and provide insight into how different support systems enable teams to perform their tasks.

Finally, this study analyzed relationships among variables, as they exist at one point in time within these companies. A time-series study, periodically monitoring changes in support systems, potency and performance would provide a basis for considering the cause-and-effect relationships among these variables.

Financial Measures

The Team Effectiveness Factor can be more appropriately examined in a longitudinal study with careful attention to the data collection process. The TEF would be generated at the team level, with the team members educated to recognize savings and resources and calculate this factor as a way to quantify these benefits. All teams within a facility would participate to avoid between-team behavioral and cultural differences.

This design would not only generate a sufficient number of TEFs, but there is a greater level of confidence that more incidents of team performance would be recorded with less information loss. In addition, researchers could also study the behavioral impact of a new measure on the team.

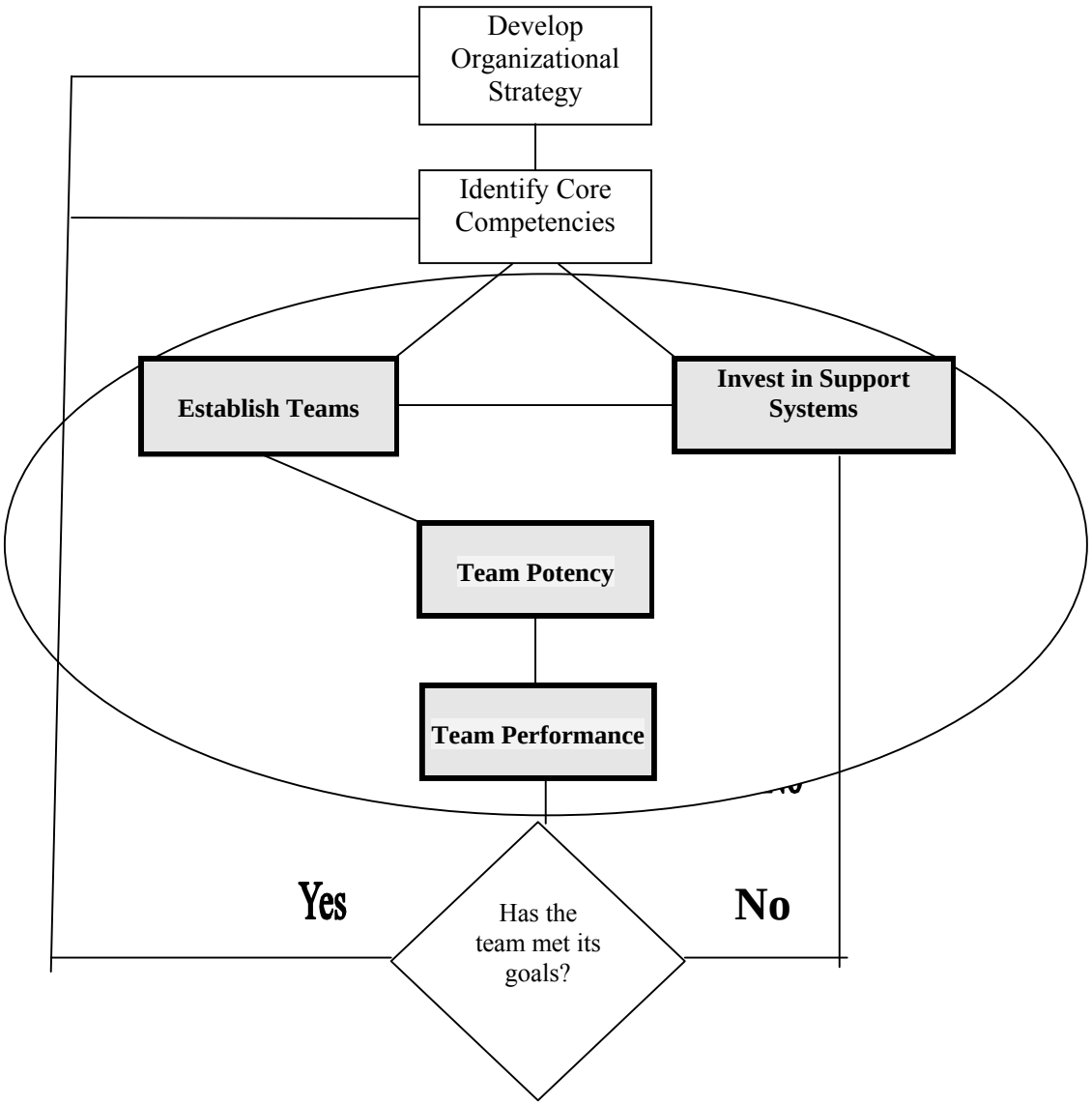
Another opportunity to validate this measure would be to develop standardized scores for current operational measures. These scores would allow comparisons with the TEF across different teams and companies.

APPENDIX A

ILLUSTRATIONS

Figure 1

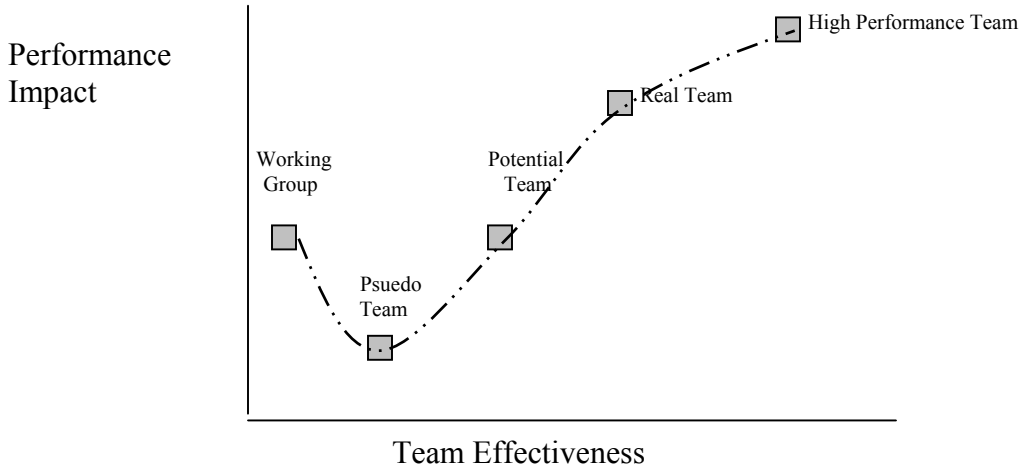
A Team-Based Organization: A Descriptive Model



Note: The three highlighted boxes within the oval denote the three elements examined in this study.

Figure 2

Team Performance Curve (Katzenbach and Smith, 1993)



Team Maturity Stages: Description
(adapted from Katzenbach & Smith [1993] and Peters [1997])

Stage	Description
1	Working Group: Clear leader; individual accountability; individual work-products; methodical meetings
2	Psuedo Team: No specific work-products; confusion over purpose and goals; unbridled personal animosity among members; ignorance of benefits of team approach; structure that stifles discussion; little communication; little mutual accountability; blame exists
3	Potential Team: Desires to shape a common purpose and performance goals; collectively accountable; open communication; understand the benefits of team approach; encouraged to work together for team benefit; team has specific work products
4	Real Team: Team has specific purpose; encourage members to participate; collective work products; shared leadership roles; mutual accountability; empowered and take initiative comfortably; team's purpose and goals are continually discussed
5	High Performance Team: All 'real team' characteristics and also deeply committed to one another's personal growth and success.

Figure 3

Review of Major Literature

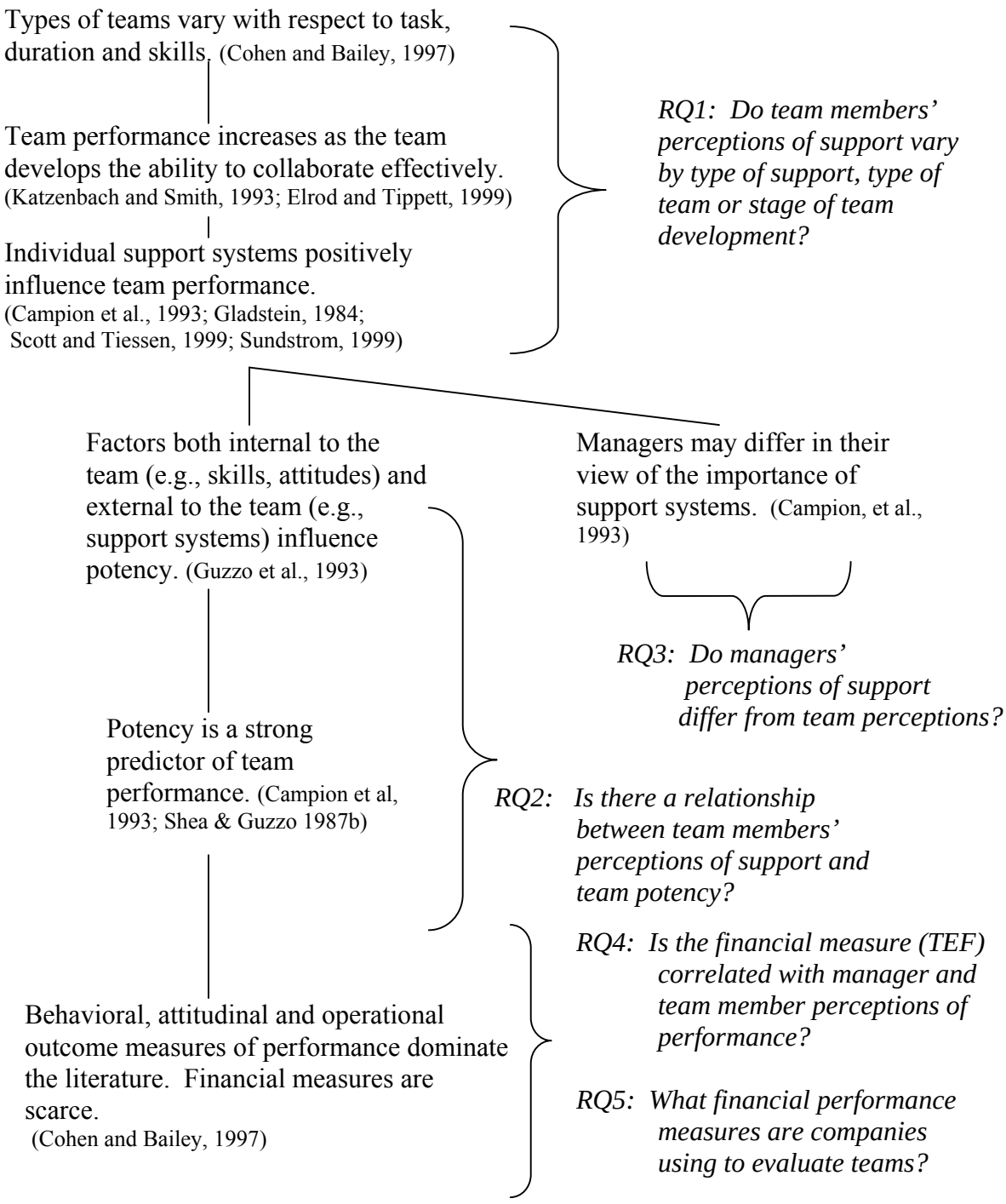
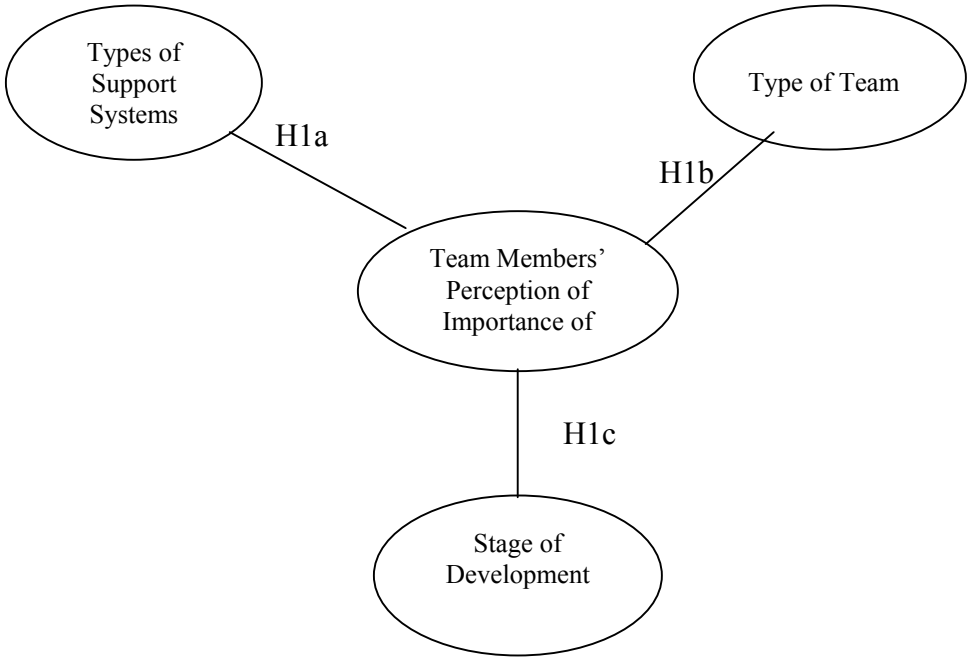


Figure 4

Hypotheses 1a through 1c



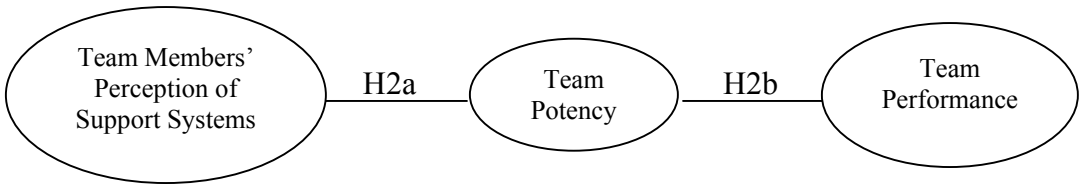
H1a: Team members' ratings of the importance of individual systems vary by type of support.

H1b: Team members' ratings of the importance of individual systems vary by type of team.

H1c: Team members' ratings of the importance of individual systems vary by stage of development.

Figure 5

Hypotheses 2a and 2b

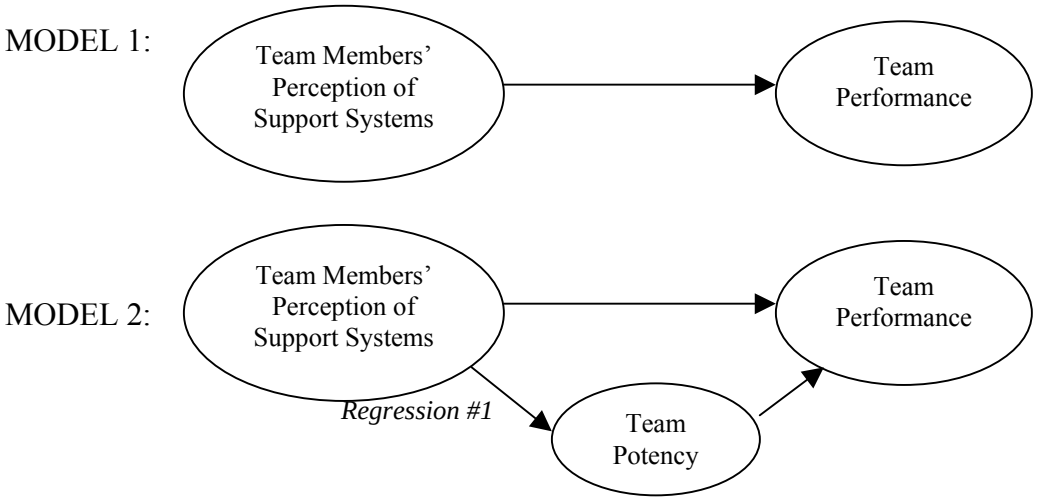


H2a: Team members' perceptions of support systems are related to team potency.

H2b: Team potency is positively associated with performance.

Figure 6

Illustration of Series of Regression Equations
Used to Support Mediation



Note: This illustration graphically presents procedures to test for mediation outlined in Baron & Kenny (1986).

Interpretation of Regressions

Variables:
Dependent Variable = Team performance
Mediator = Team potency
Independent Variables = Support Systems

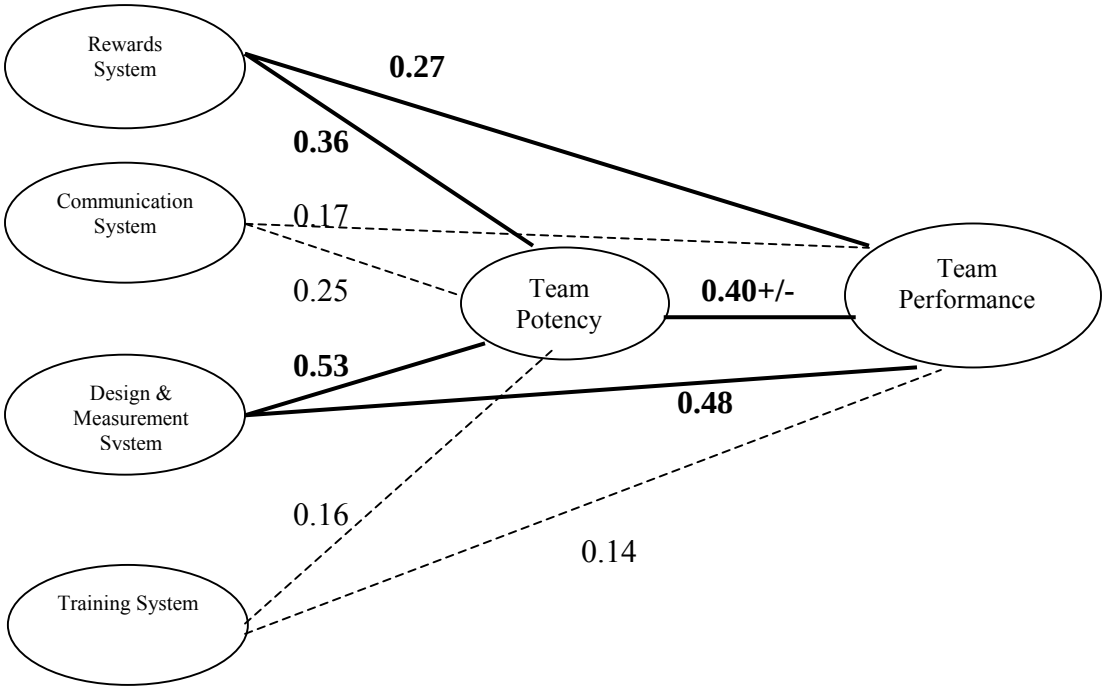
Regression Equations:
Regression #1: Mediator = Independent Variables (shown in MODEL 2)
Regression #2: Dependent Variable = Independent Variables (MODEL 1)
Regression #3: Dependent = Independent Variables + Mediator (MODEL 2)

Supporting Conditions:

1.) The independent variable must show significance in both equations 1 and 2.
2.) The magnitude of the parameter estimate in equation 3 must be less than that in equation 2.
3.) R^2 in equation 3 must be significantly higher than in equation 2.

Figure 7

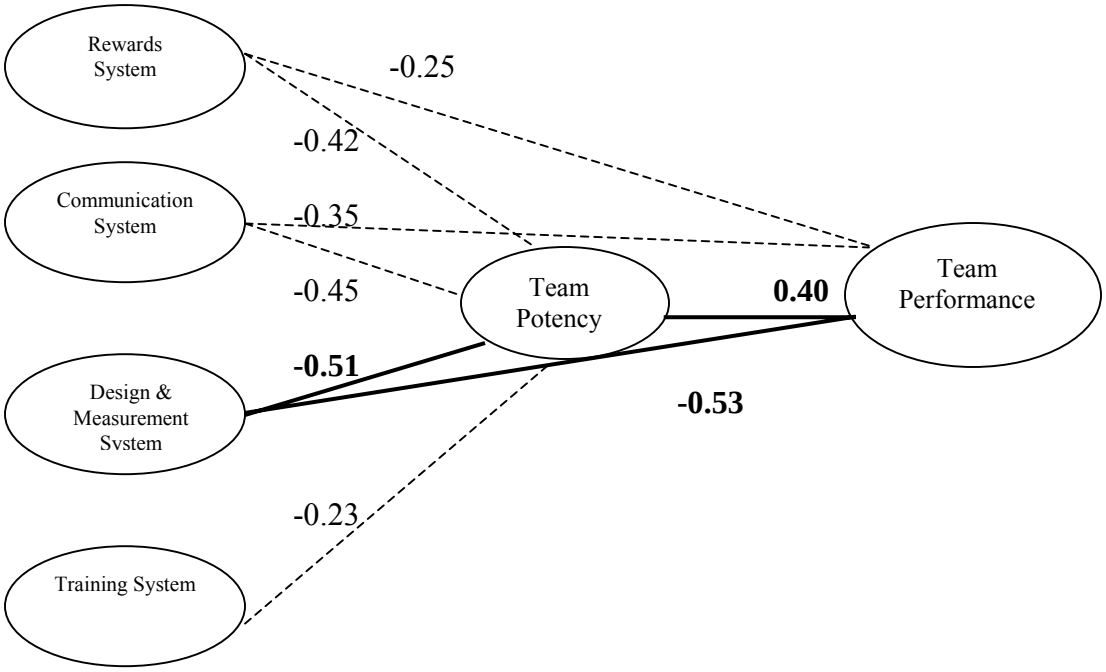
Support Systems' Presence Scores – Mediation Tests
Diagram of Significant Paths



Note: All indicated associations are significant. Parameter estimates and bold lines illustrate significant mediating relationships.

Figure 8

Support Systems' Gap Scores – Mediation Tests
Diagram of Significant Paths



Note: All indicated associations are significant. Parameter estimates and bold lines illustrate significant mediating relationships.

APPENDIX B

TABLES

Table 1

Summary of Team Performance Measures Used in Studies
Between1990 and 1995

Team Type	# Studies	Effectiveness: Measurable Outcomes	Effectiveness: Perceptions of Outcomes	Behavioral	Attitudinal
Parallel	4	3	4	2	3
Project	13	0	12	0	3
Management	13	10	2	3	1
Work	24	9	18	10	16
TOTAL	54	22	36	15	23
Percentage	100%	41%	67%	28%	41%

Note: This table is a consolidation of detailed tables provided in Cohen and Bailey, 1997

.

Table 2

Company and Team Descriptive Statistics

Company	Industry	# Team Members	# Teams	Average # Members per Team	Type of Team (# of Teams)			Stages of Development (# of Teams)				
					Work	Parallel	Project	Working Groups Stage 1	Psuedo Teams Stage 2	Potential Teams Stage 3	Real Teams Stage 4	High Performance Teams Stage 5
A	Service	86	15	6	13	2	0	0	2	1	7	5
B	Service	53	8	7	4	4	0	0	0	2	5	1
Subtotal		139 33.7%	23 33.8%	6	17	6	0	0	2	3	12	6
C	Mfg	36	7	5	11	1	6	0	4	1	1	1
D	Mfg	49	11	5	11	0	0	0	0	3	5	3
E	Mfg	36	5	7	4	1	0	0	1	2	2	0
F	Mfg	62	11	6	11	0	0	0	0	5	4	2
G	Mfg	90	11	8	10	1	0	2	3	6	0	0
Subtotal		273 66.3%	45 66.2%	6	36	3	6	2	8	13	12	6
TOTAL		412	68		53 78%	9 13%	6 9%	2 3%	10 15%	20 29%	24 35%	12 18%

Table 3

Support Systems' Description and Proposed Measurement Scale

Note: Items followed by factor loadings in parentheses are from Hall (1996). Items added by author are followed by the notation (ADDITION).

Management and Supervisor Support: (measures implementation of projects; timeliness; encourages success, and listens and responses to resource needs.)

- MS1 My company's managers/supervisors are open to multiple perspectives (such as different points of view). (.43)
- MS2 My company's managers/supervisors help provide teams with the resources they need to perform work. (.44)
- MS3 My managers/supervisors follow through with team recommendations in a timely manner. (ADDITON)

Performance Measurement: (Measures are available and are used by both team and managers. Feedback is timely and appropriate to team purpose.)

- PM1 My team has regularly planned performance reviews. (.62)
- PM2 My team uses specific performance measurements to track team goals. (.67)
- PM3 My direct supervisor uses specific measurements for our team. (.65)
- PM4 My team's performance measures are appropriate to our team's purpose.(ADDITION)

Training Systems: (Measures recognition of needs and the ease with which the team receives it.)

- T1 My team can easily get training on communication skills. (.71)
- T2 My team can easily get training on decision-making skills. (.68)
- T3 My team can easily get training on group meeting skills. (.67)
- T4 My team gets training when we need it. (.62)

Reward System: (Measures reward for effort, ties to performance measures and successes, and whether the reward (recognition) is timely.)

- R1 After we get more responsibilities, our team gets rewarded (or is recognized) in a timely manner. (.68)
- R2 After achieving goals, my team is paid (or is recognized) in a timely manner. (.73)
- R3 My team gets more pay (or is recognized) for additional effort. (.76)
- R4 My team is paid more (or is recognized) for improving work procedures. (.67)

Information System: (Measures access to information processes..)

- IS1 My team can easily collect, organize and sort information needed to perform our jobs. (.34)
- IS2 My team can easily get information on business-unit goals, strategies, and priorities. (.55)
- IS3 My team can easily get information about customers (internal or external). (.53)
- IS4 My team can easily get information about our suppliers (internal or external). (ADDITION)

Group Design: (Measures appropriate mix of people and skills, the extent to which the team understands their purpose, and whether the team has the authority needed for their purpose.)

- GD1 My work group has the skills it needs to perform work well. (.33)
- GD2 My team understands its purpose. (ADDITION)
- GD3 My team's membership is appropriate for its mission or purpose. (ADDITION)
- GD4 My team has the authority it needs to perform its work. (ADDITION)

Integration System: (Measures sharing successes through informal and formal methods.)

- INT 1 My company uses multi-functional (cross-disciplinary) teams to integrate work. (.41)
- INT 2 My team has meetings with suppliers or customers to share information. (.54)
- INT3 My team or representative meets with other teams to share information. (ADDITION)
- INT4 My team presents its recommendations to managers. (ADDITION)

Table 4

Outline of Research Questions, Hypotheses, Instrumentation and Methodology

Research Question	Hypotheses	Instrumentation	Analysis Method
1. Do team members' perceptions of support vary by type of support, type of team or stage of team development?	H1a: Team members' ratings of the importance of individual support systems vary by type of support.	Team support survey: o Team perceptions	One-way Repeated Measures ANOVA Tukey Test
	H1b: Team members' ratings of the importance of individual support systems vary by type of team.	Team support survey: o Team perceptions Questionnaire: o Type of team	ANOVA Kruskal-Wallis Test
	H1c: Team members' ratings of the importance of individual support systems vary by stage of development.	Team support survey: o Team perceptions Questionnaire: o Maturity stages	ANOVA Kruskal-Wallis Test
2. Is there a relationship between team members' perceptions of support and team potency?	H2a: Team members' perceptions of support systems are related to team potency.	Team support survey: o Team perceptions * Presence * Importance o Team potency survey	Multiple Regressions
	H2b: Team potency is positively associated with performance.	Team potency survey	Simple Regression
3. Do managers' perceptions of support differ from team perceptions?	H3: Managers' ratings of the importance of support systems differ from those of team members.	Team support survey: o Team perceptions o Managers' perceptions	ANOVA Kruskal-Wallis Test
4. Is the financial measure (TEF) correlated with manager and team member perceptions of performance?	N/a	Perceptions of performance survey: * Managers * Teams Project savings worksheet	Trends Correlations
5. What financial performance measures are companies using to evaluate teams?	N/a	Measurement Checklist Interviews: Open-ended questions	Summarize and discuss

Table 5

Pilot Study: Descriptive Statistics
(n=17)

Support System	Importance Score Means (s.d.)	Gap Score: Presence minus Importance
Management Support	4.559 (.472)	-0.6
Performance Measurement	3.956 (.510)	-0.2
Training	3.868 (.546)	-0.4
Rewards	4.059 (.877)	-0.6
Integration	4.015 (.752)	-0.1
Group Design	4.471 (.534)	0.0
Information Systems	3.971 (.551)	-0.4

Table 6

Pilot Study: Team Members' Ranking of Support Systems
(n=17)

Importance Rank	Score	GAP Rank	Score
1. Management Support	4.559	1. Group Design	0.0
2. Group Design	4.471	2. Integration	-0.1
3. Rewards	4.059	3. Performance Measurement	-0.2
4. Integration	4.015	4. Training	-0.4
5. Information Systems	3.971	5. Information Systems	-0.4
6. Performance Measurement	3.956	6. Rewards	-0.6
7. Training	3.868	7. Management Support	-0.6

Table 7

Results of Factor Analysis of Seven Support System Variables
(n=412)

ITEM	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
MS1*	0.458	0.442	0.211	-0.016	0.141
MS2	0.628[1]	0.311	0.132	0.002	0.372
MS3	0.357	0.564[2]	0.233	0.046	0.213
PM1*	0.386	0.326	0.253	0.382	0.075
PM2	0.466[1]	0.187	0.391	0.243	0.252
PM3**	0.310	0.241	0.228	0.284	0.375
PM4	0.615[1]	0.187	0.206	0.258	0.129
T1	0.161	0.192	0.233	0.690[4]	0.176
T2	0.299	0.303	0.271	0.505[4]	0.251
T3	0.107	0.101	0.137	0.697[4]	0.080
T4**	0.260	0.340	0.154	0.259	0.586
R1	0.216	0.631[2]	0.167	0.295	-0.049
R2	0.117	0.720[2]	0.107	0.191	0.382
R3	0.233	0.792[2]	0.185	0.155	0.114
R4	0.276	0.634[2]	0.210	0.165	0.153
IS1**	0.377	0.164	0.307	0.245	0.471
IS2	0.359	0.211	0.471[3]	0.230	0.187
IS3	0.106	0.157	0.685[3]	0.216	0.289
IS4	0.166	0.125	0.735[3]	0.144	0.206
GD1	0.544[1]	0.278	0.271	0.071	0.279
GD2	0.589[1]	0.244	0.275	0.222	-0.000
GD3	0.501[1]	0.145	0.264	0.151	0.213
GD4	0.690[1]	0.188	0.185	0.183	0.056
INT1	0.322	0.167	0.501[3]	0.034	-0.008
INT2	0.177	0.118	0.539[3]	0.204	-0.023
INT3**	0.401	0.329	0.260	0.231	0.201
INT4	0.245	0.192	0.453[3]	0.095	0.071

* Omitted as a meta-item.

** Omitted as not contributing to a significant factor

Note 1 Items retained on Factor 1, renamed Design and Measurement System (DM)

Note 2 Items retained on Factor 2, renamed Rewards System (REW)

Note 3 Items retained on Factor 3, renamed Communication System (COM)

Note 4 Items retained on Factor 4, renamed Training System (TRNG)

Table 8

Final Support Systems
(n=412)

Factor Loading[1]	Item Code	Support System Items, Description and Cronbach Alpha
		Design & Measurement Systems (DM): Measures appropriate mix of people and skills, the extent to which the team understands their purpose, whether the team has the authority needed for their purpose, and whether appropriate measures are in place. (α = 0.871)
0.572	GD1	My work group has the skills it needs to perform work well.
0.588	GD2	My team understands its purpose.
0.536	GD3	My team's membership is appropriate for its mission or purpose.
0.691	GD4	My team has the authority it needs to perform its work.
0.662	MS2	My company's managers/supervisors help provide teams with the resources they need to perform work.
0.492	PM2	My team uses specific performance measurements to track team goals.
0.630	PM4	My team's performance measures are appropriate to our team's purpose.
		Reward System (REW): Measures reward for effort, ties to performance measures and successes, and whether the reward (recognition) is timely. (α = 0.874)
0.574	MS3	My managers/supervisors follow through with team recommendations in a timely manner.
0.593	R1	After we get more responsibilities, our team gets rewarded (or is recognized) in a timely manner.
0.753	R2	After achieving goals, my team is paid (or is recognized) in a timely manner.
0.803	R3	My team gets more pay (or is recognized) for additional effort.
0.656	R4	My team is paid more (or is recognized) for improving work procedures.
		Communication Systems (COM): measures communication to suppliers, customers and managers (α = 0.810)
0.487	IS2	My team can easily get information on business-unit goals, strategies, and priorities.
0.696	IS3	My team can easily get information about customers (internal or external).
0.768	IS4	My team can easily get information about our suppliers (internal or external).
0.475	INT1	My company uses multi-functional (cross-disciplinary) teams to integrate work.
0.523	INT2	My team has meetings with suppliers or customers to share information.
0.448	INT4	My team presents its recommendations to managers.
		Training Systems (TRNG): Measures recognition of needs and the ease with which the team receives it. (α = 0.795)
0.671	T1	My team can easily get training on communication skills.
0.534	T2	My team can easily get training on decision-making skills.
0.764	T3	My team can easily get training on group meeting skills.

[1]These factor scores are from a factor analysis run on the final 21 items.
[2]Cronbach Alpha scores for each factor and included items.

Table 9

Descriptive Statistics and Intercorrelation Matrix
(n=68)

	VARIABLES	CODE	1 POT	2 POT R	3 PERF	4 PERF R	5 REW	6 DM	7 COM	8 TRNG
	Dependent Variables									
1	Potency –Team	POT								
2	Potency -- Manager	POTR	.379***							
3	Performance – Team	PERF	.609***	.246**						
4	Performance -- Manager	PERFR	.134	.504**	.247**					
	IV -- Importance Variables									
5	Rewards	REW	.151	.037	.280*	-.017				
6	Design/Measurement	DM	.365***	.200	.369***	.383***	.540***			
7	Communications	COM	.177	.072	.092	.182	.282**	.687***		
8	Training	TRNG	.158	.039	.216*	.084	.411***	.451**	.469***	
	IV – Presence Variables									
9	Rewards	REWx	.423***	.062	.415***	.012	.468***	.386***	.313***	.554***
10	Design/Measurement	DMx	.487***	.184	.578***	.215	.476***	.693***	.532***	.539***
11	Communications	COMx	.261**	.057	.222*	.042	.265**	.509***	.803***	.426***
12	Training	TRNGx	.206*	-.017	.234*	.095	.189	.240**	.398***	.570***
	IV -- GAP Variables									
13	Rewards	REWgap	.401***	.140	.283**	.018	-.126	.061	.175	.340***
14	Design/Measurement	Dmgap	.313***	.100	.428***	-.076	-.073	-.129	-.028	.243**
15	Communications	COMgap	.243**	.057	.244***	-.153	.009	-.173	-.106	.006
16	Training	TRNGgap	.183	.015	.150	-.067	-.059	-.148	-.012	-.086
	Mean		4.039	3.677	3.796	4.349	3.850	4.182	3.616	3.507
	s.d.		0.541	0.414	0.537	0.520	0.386	0.395	0.491	0.525

* alpha <.10
** alpha <.05
*** alpha <.01

Table 9 -- Continued

	VARIABLES	CODE	9 REW x	10 DM x	11 COM x	12 TRNG x	13 REW gap	14 DM gap	15 COM gap	16 TRNG gap
	Dependent Variables									
1	Potency –Team	POT								
2	Potency -- Manager	POTR								
3	Performance – Team	PERF								
4	Performance -- Manager	PERFR								
	IV -- Importance Variables									
5	Rewards	REW								
6	Design/Measurement	DM								
7	Communications	COM								
8	Training	TRNG								
	IV – Presence Variables									
9	Rewards	REWx								
10	Design/Measurement	DMx	.745***							
11	Communications	COMx	.628***	.707***						
12	Training	TRNGx	.699***	.585***	.629***					
	IV -- GAP Variables									
13	Rewards	REWgap	.791***	.510***	.545***	.634***				
14	Design/Measurement	Dmgap	.578***	.614***	.400***	.530***	.626***			
15	Communications	COMgap	.533***	.371***	.476***	.459***	.637***	.721***		
16	Training	TRNGgap	.403***	.246**	.359***	.705***	.499***	.519***	.610***	
	Mean		2.945	3.685	3.240	3.180	-.990	-.538	-.460	-.535
	s.d.		0.634	0.494	0.555	0.683	0.512	0.336	0.293	0.432

* alpha <.10
** alpha <.05
*** alpha <.01

Table 10

Hypotheses Results and Conclusion Summary

Hypotheses H1a, H1b, H1c, H2a, H2b, H3

HYPOTHESES	RESULTS	CONCLUSION
H1a: Team members' ratings of the importance of individual support systems vary by type of support.	Supported	Team members perceive both the presence and deficiencies of support systems differently.
H1b: Team members' ratings of the importance of individual support systems vary by type of team.	Supported	Team members from work teams and cross-functional teams perceive the importance of the Design and Measurement System and the Communication System differently.
H1c: Team members' ratings of the importance of individual support systems vary by stage of development.	Supported	Team members view the Design and Measurement System differently across different stages of development.
H2a: Team members' perceptions of support systems are related to team potency.	Supported	1. Team members' perceptions of the presence of all support systems are positively associated with team potency. 2. Team members' perceptions of the deficiencies of the Design and Measurement System, Rewards System and communications systems are negatively associated with team potency. 3. A deficiency in the Training System does not significantly influence performance.
H2b: Team potency is positively associated with performance.	Supported	Team potency is positively associated with team performance.
H3: Managers' ratings of the importance of support systems differ from those of team members.	Supported	Team members and managers view the Communication and Training Systems differently.

Table 11

Analyses Results for Hypothesis 1a

Hypothesis 1a: Team members' perceptions of the importance of individual support systems vary by type of support.

RESULTS: Team members perceive support systems differently.

One-Way Repeated Measures ANOVA

	DM	REW	COM	TRNG
Importance (means)**	4.18	3.85	3.62	3.51
F = 54.7				
p = <.001				
GAP (means)**	.50	.90	.39	.33
F = 55.3				
p = <.001				

** alpha < .001

Table 12

Results of Post Hoc Tests to Determine Which Pairs of Support Systems Are Perceived Differently by Team Members

Panel A: Tukey Test Results Using Team Members' Perception of the Importance of Support Systems

RESULTS: The Training and Communications Systems is the only pair of support systems perceived as not significantly different from each other.

Variables: Importance of Support Systems

	Significant Pairs of Support Systems[1]			
Support System	DM	REW	COM	TRNG
DM		sig	sig	sig
REW			sig	sig
COM				insig
TRNG				

Panel B: Tukey Test Results Using Team Members' Perception of Deficiencies (GAP) in Support Systems:

RESULTS: Team members' perception of the deficiency of the Rewards System is significantly different from each of the other three systems.

Variables: Deficiencies of Support Systems

	Significant Pairs of Support Systems[1]			
Support System	DM	REW	COM	TRNG
DMgap		sig	insig.	insig
REWgap			sig	sig
COMgap				insig
TRNGgap				

NOTE 1: The Tukey Test shows which pairs of support systems are significantly different from each other at the 95% confidence level.

Table 13

Results of Post Hoc Support Systems' Analysis by Industry

RESULTS: Team members from the service and manufacturing industries perceive the Design and Measurement System and the Training System differently.

Support System	Service Industry n=23 mean (s.d.)	Manufacturing Industry n=45 mean (s.d.)
DM*** p = 0.0039 F = 8.95	4.37 (0.33)	4.09 (0.40)
REW p = 0.1429 F = 2.20	3.95 (0.45)	3.80 (0.34)
COM p = 0.4490 F = 0.58	3.68 (0.40)	3.58 (0.53)
TRNG*** p = 0.0086 F = 3.51	3.74 (0.43)	3.39 (0.53)

* alpha <.10
** alpha <.05
*** alpha <.01

Table 14

ANOVA Results Testing the Influence of Type of Team on Support Systems

Hypothesis 1b: Team members' perceptions of the importance of individual support systems vary by type of team.

RESULTS: Team members of different types of teams perceive the Communication and the Design and Measurement System differently.

Panel A
ANOVA and Kruskal Wallis[1] Results for Three Types of Teams

SS	Work Teams (mean) N=53	Parallel Teams (mean) N=9	Project Teams (mean) N=6	Kruskal Wallis df=2 p-value
DM F = 2.22 p= .1163	4.13	4.29	4.45	.074*
REW F = 0.28 p= .7540	3.87	3.82	3.75	.798
COM F = 6.58 p= .0025***	3.52	3.84	4.16	.001***
TRNG F = 1.69 p= .1925	3.52	3.67	3.17	.176

* alpha < .10
** alpha < .05
*** alpha < .01

Note 1: Shaded areas present results of Kruskal Wallis tests.

Table 14 -- Continued

ANOVA Results for Hypothesis 1b

Hypothesis 1b: Team members' perceptions of the importance of individual support systems vary by type of team.

RESULTS: Team members of different types of teams perceive the Communication and the Design and Measurement System differently.

Panel B
ANOVA Results for Two Types of Teams[2]

Support Systems	Work Teams N=53	Cross-Functional Teams N=15
DM (mean) F = 3.83 p= .0545*	4.13	4.36
REW (mean) F = 0.46 p= .5021	3.87	3.79
COM (mean) F = 11.24 p= .0013***	3.52	3.97
TRNG (mean) F = 0.11 p=0.7446	3.52	3.47

* alpha < .10
** alpha < .05
*** alpha < .01

Note 2: Parallel teams and project teams have been combined into the category called Cross-Functional Teams.

Table 15

Results of ANOVA Testing Differences in Teams' Perceptions of Support Systems Across Four Stages of Development

Hypothesis 1c: Team members' perceptions of the importance of individual support systems vary by stage of development.

RESULTS: Team members of teams in different stages of development perceive the Design and Measurement System differently.

SS	Stage 2 n=10	Stage 3 n=20	Stage 4 n=24	Stage 5 n=12	Kruskal Wallis p-value
DM (mean) F = 4.40 p= .003***	4.18	4.01	4.20	4.51	0.0014**
REW (mean) F = 1.48 p= .220	3.73	3.81	3.98	3.82	0.2518
COM (mean) F = 1.58 p= .190	3.59	3.50	3.59	3.92	0.1153
TRNG (mean) F = 0.05 p=0.996	3.45	3.51	3.51	3.55	0.8496

* alpha < .10
** alpha < .05
*** alpha < .01

Table 16

Hypothesis 2a: Summary of Test Results Regressing Team Potency on Support Systems Presence and GAP Scores

(Text discussion follows this order)

Test	Independent Variables	Results Summary – Significant Variables
H2a: Presence Scores	All 4 Support Systems in Combination (1 equation)	Design/Measurement
	Individual Support Systems (4 equations)	Rewards Communications Design/Measurement Training
H2a: GAP Scores	All 4 Support Systems in Combination (1 equation)	Rewards
	Individual Support Systems (4 equations)	Rewards Communications Design/Measurement
Mediation: Presence Scores	All 4 Support Systems in Combination	Design/Measurement
	Individual Support Systems	Design/Measurement Rewards
Mediation: GAP Scores	All 4 Support Systems in Combination	None
	Individual Support Systems	Design/Measurement

NOTE: Variance Inflation Factors (VIF) for all 4 variables' presence and gap scores are less than 3.0, indicating inconsequential collinearity.

Table 17

Results of Regressions Tests Regressing Team Potency on Support Systems' Presence Scores

Hypothesis 2a: Team members' perceptions of support systems are related to team potency.

Panel A: Results of Multiple Regression Test of All 4 Support Systems' Presence Score

RESULTS: Team members' perception of the Design and Measurement System significantly influences team potency in the presence of the other support systems.

(1) $POT = \beta_1 + \beta_2 DM + \beta_3 COM + \beta_4 TRNG + \beta_5 REW + \varepsilon_i$

$R^2 = .28$
$F = 6.14$

Variable	Coefficient	t-statistic	p-value
DMx	0.53876	1.50	0.0084***
COMx	-0.13956	-1.15	0.3838
TRNGx	-0.14530	-0.88	0.2531
REWx	0.23500	2.72	0.1383

Panel B: Results of Simple Regression Tests of Each Support System Presence Score

RESULTS: Team members' perception of each support system significantly influences team potency.

(2) $POT = \beta_1 + \beta_2 DM + \varepsilon_i$
(3) $POT = \beta_1 + \beta_2 COM + \varepsilon_i$
(4) $POT = \beta_1 + \beta_2 TRNG + \varepsilon_i$
(5) $POT = \beta_1 + \beta_2 REW + \varepsilon_i$

Variable	Coefficient	t-statistic	p-value	R^2	F
DMx	0.53472	4.53	<0.0001***	.24	20.56
COMx	0.25497	2.20	0.0313**	.07	4.84
TRNGx	0.16345	1.71	0.0914*	.04	2.93
REWx	0.36115	3.79	0.0003***	.18	14.37

* alpha <.10
** alpha <.05
*** alpha <.01

Table 18

Results of Regressions Tests Regressing Team Potency on Support Systems' Gap Scores

Hypothesis 2a: Team members' perceptions of support systems are related to team potency.

Panel A: Results of Multiple Regression Test of All 4 Support Systems' GAP Score

RESULTS: Team members' perception of a deficiency in the Rewards System significantly influences team potency in the presence of the other support systems.

(6) $POT = \beta_1 + \beta_2 DMgap + \beta_3 COMgap + \beta_4 TRNGgap + \beta_5 REWgap + \varepsilon$

$R^2 = .17$
$F = 3.13$

Variable	Coefficient	t-statistic	p-value
DMgap	-0.23056	-1.00	0.3810
COMgap	0.32670	.45	0.2921
TRNGgap	-0.03991	.18	0.8235
REWgap	-0.36492	-2.21	0.0222**

Panel B: Results of Simple Regression Tests of Each Support System GAP Score

RESULTS: Team members' perception of deficiencies in the Communications, Rewards and the Design and Measurement System each significantly influence team potency.

(7) $POT = \beta_1 + \beta_2 DMgap + \varepsilon_i$
(8) $POT = \beta_1 + \beta_2 COMgap + \varepsilon_i$
(9) $POT = \beta_1 + \beta_2 TRNGgap + \varepsilon_i$
(10) $POT = \beta_1 + \beta_2 REWgap + \varepsilon_i$

Variable	Coefficient	t-statistic	p-value	R^2	F
DMgap	-0.51195	-2.72	0.0083***	.15	7.42
COMgap	-0.45067	-2.04	0.0454**	.06	4.16
TRNGgap	-0.22998	-1.52	0.1345	.03	2.30
REWgap	-0.41648	-3.45	0.0010***	.15	11.89

* alpha <.10
** alpha <.05
*** alpha <.01

Table 19

Post Hoc Tests for the Mediating Influence of Team Potency for Presence Scores

RESULTS: Team potency mediates the influence of the perception of the presence of the Design and Measurement System on performance in the presence of all support systems.

(11a) Independent Variables: Presence Scores
Dependent Variable: Team Potency
R^2 = .2804 F = 6.14

Variable	Coefficient	Standard Error	t-Statistic	p-value
REWx	0.23500	0.15655	1.50	0.1383
TRNGx	-0.14530	0.12597	-1.15	0.2531
COMx	-0.13956	0.15911	-0.88	0.3838
DMx	0.53876	0.19802	2.72	0.0084***

(11b) Independent Variables: Presence Scores
Dependent Variable: Team Performance ($PERF_{TEAM}$)
R^2 = .4075 F = 10.83

Variable	Coefficient	Standard Error	t-Statistic	p-value
REWx	0.06069	0.10861	0.56	0.5783
TRNGx	-0.04779	0.08739	-0.55	0.5864
COMx	-0.26648	0.11038	-2.41	0.0187**
DMx	0.67754	0.13737	4.93	<.0001***

(11c) Independent Variables: Presence Scores and Potency
Dependent Variable: Team Performance ($PERF_{TEAM}$)
R^2 = .5209 F = 13.48

Variable	Coefficient	Standard Error	t-Statistic	p-value
REWx	-0.01063	0.10019	-0.11	0.9159
TRNGx	-0.00370	0.08005	-0.05	0.9633
COMx	-0.22413	0.10067	-2.23	0.0296**
DMx	0.51404	0.13163	3.91	0.0002***
POT	0.30347	0.07923	3.83	0.0003***

* alpha <.10
** alpha <.05
*** alpha <.01

Table 20

Post Hoc Tests Mediation Tests for the Mediating Influence of Team Potency Using Presence Scores as Independent Variables in Separate Regression Equations[1]

RESULTS: Team potency mediates the influences of the perception of the Design and Measurement System and the Rewards System on team performance.

Independent Variable	Equation #1 Pot = IV + e	Equation #2 Perf = IV + e	Equation #3 Perf = IV +Pot+ e	Results
REWx	β = .36115 p= 0.0003*** R^2 = .18 F = 14.37	β = .27093 p= 0.0004*** R^2 = .18 F = 13.72	REWx β = .12519 Pot β = .40353 p= 0.0750* R^2 = .40 F = 21.75	Supports mediation
DMx	β = .53472 p= <.0001*** R^2 = .24 F = 20.56	β = .48487 p=<.0001*** R^2 = .33 F = 33.12	DMx β = .30947 Pot β = .32803 p= 0.0006*** R^2 = .47 F = 29.35	Supports mediation
COMx	β = .25497 p= <.0313** R^2 = .07 F = 20.56	β = .16579 p=<.0684* R^2 = .05 F = 3.43	COMx β = .05056 Pot β = .45195 p= 0.5068 R^2 = .38 F = 19.50	Does not support mediation[2]
TRNGx	β = .16345 p= <.0914 R^2 = .04** F = 2.93	β = .14182 p=<.0547 R^2 = .05** F = 3.83	TRNGx β = .06865 Pot β = .44763 p= 0.2592 R^2 = .38 F = 20.18	Does not support mediation[2]

* alpha <.10
** alpha <.05
*** alpha <.01

Note 1: Shaded rows highlight significance.
Note 2: The independent variable in Equation #3 is not significant.

Table 21

Post Hoc Tests for the Mediating Influence of Team Potency for GAP Scores

RESULTS: Team potency does not mediate the influence of the perception of deficiencies of support systems on team performance in the presence of one another.

(12a) Independent Variables: GAP Scores
Dependent Variable: Team Potency (POT_{TEAM})
$R^2 = .1552$ F = 2.89

Variable	Coefficient	Standard Error	t-Statistic	p-value
REWgap	-0.36492	0.15558	-2.35	0.0222**
TRNGgap	-0.03991	0.17816	-0.22	0.8235
COMgap	0.32670	0.30752	1.06	0.2921
DMgap	-0.23056	0.26135	-0.88	0.3810

(12b) Independent Variables: GAP Scores
Dependent Variable: Team Performance ($PERF_{TEAM}$)
$R^2 = .1530$ F = 2.84

Variable	Coefficient	Standard Error	t-Statistic	p-value
REWgap	-0.06971	0.11910	-0.59	0.5604
TRNGgap	0.02039	0.13639	0.15	0.8817
COMgap	0.13329	0.23542	0.57	0.5733
DMgap	-0.46593	0.20007	-2.33	0.0231**

(12c) Independent Variables: GAP Scores and Potency
Dependent Variable: Team Performance ($PERF_{TEAM}$)
$R^2 = .4325$ F = 9.45

Variable	Coefficient	Standard Error	t-Statistic	p-value
REWgap	0.09078	0.10247	0.89	0.3791
TRNGgap	0.03794	0.11258	0.34	0.7372
COMgap	-0.01039	0.19597	-0.05	0.9579
DMgap	-0.36454	0.16609	-2.19	0.0319**
POTgap	0.43979	0.07958	5.53	<.0001**

* alpha <.10
** alpha <.05
*** alpha <.01

Table 22

Hypothesis 2a – Individual Independent Variables – GAP Scores

RESULTS: Team members' perception of the deficiency of the Design and Measurement
System significantly influences team potency and performance.

Independent Variable	Equation #1 Pot = IV + e	Equation #2 Perf = IV + e	Equation #3 Perf = IV +Pot+ e	Results
REWgap	β = -0.41648 p= 0.0010*** R^2 = .15 F = 11.89	β = -0.25300 p= 0.0100*** R^2 = .10 F = 7.04	REWgap β = -0.069 Pot β = .43992 p=<.4237 R^2 = .38 F = 19.66	Does not support mediation[2]
DMgap	β = -0.51195 p= <.0083*** R^2 = .10 F = 7.42	β = -0.53741 p=0.0002*** R^2 = .19 F = 15.53	DMgap β =-0.333 Pot β = .39985 p= 0.0077*** R^2 = .44 F = 25.16	Supports mediation
COMgap	β = -0.45067 p= 0.0454** R^2 = .06 F = 4.16	β = -0.34595 p=0.0445** R^2 = .06 F = 4.19	COMgap β = -0.145 Pot β = .44646 p= 0.3133 R^2 = .38 F = 19.97	Does not support mediation[2]
TRNGgap	β = -0.22998 p= .1345 R^2 = .03 F = 2.30	β = .14123 p=0.2209 R^2 = .02 F = 1.24	TRNGgap β = -.0385 Pot β = .45988 p= 0.6896 R^2 = .37 F = 19.27	Does not support mediation[2]

* alpha <.10
** alpha <.05
*** alpha <.01

Note 1: Shaded rows highlight significance.
Note 2: The independent variable in Equation 3 is not significant.

Table 23

Results of Regression Test Regressing Team Perception of Team Performance on Team Potency

Hypothesis 2b: Team potency is positively associated with team performance.

Panel A: Test Results Regressing Team Perception of Performance on Team Potency

RESULTS: Team potency significantly influences team member perception of performance.

(13) $PERF_{TEAM} = \beta_1 + POT_i + \varepsilon$ (one-tailed test)

$R^2 = .3707$
$F = 38.88$

Variable	Coefficient	t-Statistic	p-value
POT	0.46550	6.24	<.0001***

Panel B: Post Hoc Test Results Regression Team Manager Perception of Performance on Team Manager Perception of Team Potency

RESULTS: Team manager perception of team potency marginally influences team manager perception of performance.

$PERF_{MGR} = \beta_1 + POT_{MGR\,i} + \varepsilon$ (one-tailed test)

$R^2 = .06$
$F = 3.60$

Variable	Coefficient	t-Statistic	p-value
POT_{MGR}	0.30275	1.90	.0304*

* alpha <.10
** alpha <.05
*** alpha <.01

Table 24

ANOVA Results Testing for Differences in Team and Team Manager Perceptions of the Importance of Support Systems

Hypothesis 3: Managers' perceptions of the ratings of support systems differ from those of teams.

RESULTS: Team managers and teams differ in their perception of the importance of the Training and Communication Systems.

ANOVA Results

SS	Teams Mean (s.d.)	Team Managers Mean (s.d.)
DM		
F = 1.19	4.18	3.96
p= 0.278	(0.39)	(0.62)
REW		
F = 1.09	3.85	3.77
p= 0.299	(0.39)	(0.70)
COM		
F = 9.54	3.62	3.90
p= 0.003**	(0.49)	(0.45)
TRNG		
F = 4.44	3.51	4.29
p= 0.037**	(0.53)	(0.51)

* alpha <.10
** alpha <.05
*** alpha <.01

Table 25

Results of ANOVA Tests Comparing the Scores for Potency and Performance of Teams and Team Managers

RESULTS: Team managers and team members differ in their perception of the team potency and performance.

ANOVA Results[1]

	Teams Mean (s.d.)	Team Managers Mean (s.d.)	Kruskal-Wallace p-value
Team Potency F = 10.627 p= 0.0014***	4.039 (.541)	3.677 (.414)	p=0.0003***
Team Performance F = 4.44 p= 0.165	3.796 (.537)	4.349 (.520)	p=0.0861 *

Note 1: Shaded areas present Kruskal-Wallis results.

* alpha <.10
** alpha <.05
*** alpha <.01

Table 26

Summary of Team Project Savings, Effectiveness Factors and Perceptions of Potency and Performance by Team

Team	Type	Stage of Development (Stages 1 to 5)	Project Benefits	Project Cost	Actual Factor	Final Factor[2]	Team Potency	Team Perception of Performance	Manager Perception of Performance
A1	Parallel	Real Team (4)	$68,144	$5,250	12.9	12.9	4.54	4.06	4.00
A13	Work	Real Team (4)	$5,864	$329	18.1	18.1	4.27	3.70	3.80
D1	Work	High Performance Team(5)	$95,454	0	n/a	20.0	4.66	3.85	5.00
D5 – Project 1	Work		$107,166	$1,000					
D5 – Project 2	Work	Real Team (4)	$292,467	$18,600	20.4	20.0	4.48	3.87	4.00
F4	Work	Potential Team (3)	$300,000	$40,000	7.5	7.5	3.98	3.58	3.20
F5	Work	Potential Team (3)	$38,000	$3,800	10.0	10.0	4.15	3.93	3.80
F7	Work	Real Team (4)	$49,000	0	n/a	20.0	4.16	3.95	4.20
G2	Parallel	Potential Team (3)	$1,145,050	0	n/a	20.0	4.25	3.96	4.00
G5	Work	Potential Team (3)	$69,600	0	n/a	20.0	4.22	3.60	3.60

Note 1: 17% of teams report project savings (10 projects for 53 participating teams).
Note 2: Maximum score of 20.0.

Table 27

Results of Correlation Analysis among TEF and Perceptions of Potency and Performance

(p-values) n=9

	TEF	Potency	Perf (team)	Perf (mgr)
TEF	1.000	0.449 (0.225)	0.125 (0.749)	0.563 (0.115)
Potency		1.000	0.457 (0.216)	0.778** (0.014)
Perf (team)			1.000	0.521 (0.151)
Perf (mgr)				1.000

* alpha <.10
** alpha <.05
*** alpha <.01

Table 28

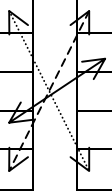
Operational and Financial Measures --
Percentage Team Members Selected Categories of Measures
by Company and Industry

	Cycle	Quality	Quantity	Cost	Customer Service	Speed	Financial
Company A	84%	93%	74%	37%	86%	68%	39%
Company B	39%	85%	36%	41%	85%	37%	44%
Service Industry	70%	90%	62%	40%	88%	59%	43%
Company C	36%	72%	11%	61%	67%	58%	67%
Company D	52%	98%	93%	64%	64%	80%	67%
Company E	61%	81%	81%	78%	64%	69%	88%
Company F	72%	100%	72%	66%	76%	59%	70%
Company G	16%	77%	40%	58%	66%	26%	49%
Manufacturing Industry	40%	83%	55%	62%	66%	51%	62%

Table 29

Operational and Financial Measures – Percentage Ranking of Team Members Selecting Measurement Category for Service and Manufacturing Companies

SERVICE INDUSTRY			MANUFACTURING INDUSTRY		
Rank	Measurement Category	% Team Members	Rank	Measurement Category	% Team Members
1	Quality	90%	1	Quality	83%
2	Customer Service	88%	2	Customer Service	66%
3	Cycle	70%	3	Cost	62%
4	Quantity	62%	3	Financial	62%
5	Speed	59%	4	Quantity	55%
6	Financial	43%	5	Speed	51%
7	Cost	40%	6	Cycle	40%



APPENDIX C

Appendix C
Individual Support Systems Description

Group design involves aligning team mission with the skills and ability of specific teams. It also includes selecting appropriate team members and size (Hall 1998). Several studies have found that group design, composition and task alignment are related to team effectiveness (Campion et al. 1993; Gladstein 1984; Wageman 1997). Some studies refer to this system as a team characteristic rather than as an environmental or support system. This is included here as a support system because management decisions and planning can directly impact this factor, particularly at startup.

Information Systems refer to the accessibility of information by the team. Information may entail collecting, organizing and storing process information (e.g., scrap rates, production quotas), resource or cost information (e.g., material prices, machine overhead) or customer feedback (e.g., satisfaction indices, returns). Support for this factor as a predictor of effectiveness has been found in several studies (Cohen et al, 1996; Hackman and Walton, 1986; Lawler, 1986).

Direct Supervisor Support and Executive Management are two similar, yet separate systems, according to Hall (1998). Supervisor support is a role of facilitation and requires leadership and coaching skills. Facilitation includes providing necessary resources and, in many cases, acting as liaison with other parts of the organization. Executive managerial support involves communicating priorities to the teams and providing support (capital, facilities, resources) and encouragement (open to new ideas, acting on recommendations). Most studies fail to distinguish between direct supervisor support and executive management support, but refer to managerial support as one factor

(Burningham and West 1995; Campion et al. 1993; Wageman 1997). Studies using the more general term management support usually align with this definition. This factor has been found to relate to team performance (Burningham and West 1995; Campion et al. 1993).

Training systems develop the performance abilities of teams. They build skills (e.g. interpersonal, leadership, facilitation, decision-making, consensus building) that enable individuals to work as a team. Training has been examined in several studies and found to be a significant factor influencing performance (Cohen et al. 1996; Lawler 1986; Campion et al. 1993).

Performance Measurement Systems assess the level of skill and ability development, including regular feedback to the teams on their performance using understandable, well-defined metrics. Scott and Tiessen (1999) investigated the incidence and importance of performance measurement and found it positively associated with team performance. Burningham and West (1995) results suggest that appraisal and monitoring group processes are of primary importance in predicting group innovation

Performance measurement aligns team goals with those of the organization and ensures that they are clearly communicated to the team. Shea and Guzzo (1987b) found indications that proper alignment of team and organizational goals is a predictor of team effectiveness. Kaplan and Norton (1996) demonstrated that goal clarity and measures encouraging teamwork and are key to the success of teams.

Rewards Systems reinforce desirable goals and priorities and influence both individual and group behaviors. Rewards also include reinforcement and recognition programs. To be most effective, they need to align with organizational strategies.

Several studies have found that reward systems affect team performance (Cohen et al. 1996; Hackman and Walton 1986; Scott & Tiessen 1999).

Integration System provides a mechanism for teams to communicate with other teams and parts of the organization. Integration systems link operating units vertically and horizontally in an effort to share information and leverage knowledge developed by other teams.

APPENDIX D

TEAM PROJECT SAVINGS

TEAM:_____

Description of Project:_____

Implementation Date:_____**Reviewer**:_____

	Calculations	**Dollars**
Increased Revenue (annualized):		
Incremental Savings (annualized):		
Material:		
Labor:		
Overhead:		
Other Savings:		
TOTAL INCREMENTAL SAVINGS and REVENUE		$_____
Incremental Cost (annualized):		
Equipment:		
Material:		
Labor:		
Utilities:		
Other Costs:		
TOTAL INCREMENTAL COSTS:		$_____
NET ANNUALIZED SAVINGS:		$_____

APPENDIX E

Team Member Survey

UNIVERSITY of NORTH TEXAS

College of Arts and Sciences
Department of Psychology
Interdisciplinary Center for the Study of Work Teams

Dear Team Member,

We are asking for your help. The Center for the Study of Work Teams at the University of North Texas is involved in a multi-organization study of work teams and organizational support. The objective of this project is to increase our understanding of the drivers of teams' success in meeting their goals.

Attached is a questionnaire that we would like you to complete. It asks a variety of questions concerning your team and company. We hope that you will take a few minutes to complete this questionnaire. Your participation will help us to better understand what factors enable a team to succeed, as well as what factors hinder their success. A similar survey is being completed by a number of team members in your firm and in other organizations. The results of this project will be summarized and appropriate people within the University and your company will be given a summary report.

We emphasize that this is a research project. Your responses are confidential and we guarantee that your choice to participate and your responses will not be identified with you personally. In fact, we ask that you do not write your name on the questionnaire, we do not need to know who you are. Your participation is completely voluntary and you may withdraw at anytime without penalty or prejudice. There is no risk to you in participating.

Some terms used in this survey may be different from those used in your organization. For example, you may use the term 'work group' or 'crew'. However this survey uses the word 'team' and has the same meaning. Please refer to the following list while completing the survey. Please ask me if you need any further clarifications.

Survey uses:	Your word may be:
Team	Work group, Crew
Supervisor/Manager	Coach, Facilitator, Team Leader

If you have any questions, please contact one of us at the University of North Texas.

Thank you for your participation,

Michael M. Beyerlein
Director, Center for the Study of Work Teams
(940) 565-2654
beyerlei@unt.edu

Frances Kennedy
Graduate Student
(940) 565-3080
kennedy@COBAF.unt.edu

NOTE: The UNT Committee for the protection of human subjects has reviewed this project (940/565-3940).

PART A

1. Name of Organization_____ 2. Team Name_____

3. Number of months on this team_____ 4. Number of teams on which you participate _____

Instructions: Rate on a scale of one to five the extent to which each of the following statements describes your team. Indicate your rating by circling the appropriate number on the scale.

Rating scale:

1 Strongly disagree 3 Neither agree nor disagree 5 Strongly agree
2 Disagree 4 Agree

Statement	Rating
5. My team has produced high quality work.	1 2 3 4 5
6. My team believes it can be very productive.	1 2 3 4 5
7. My team has missed deadlines.	1 2 3 4 5
8. My team has little confidence in itself.	1 2 3 4 5
1. My team can get a lot of work done when it works hard.	1 2 3 4 5
10. My team has never spent more than its budget limit.	1 2 3 4 5
11. My team believes it can become unusually good at producing high-quality work.	1 2 3 4 5
2. My team feels it can solve any problem it encounters.	1 2 3 4 5
3. My team has not developed new methods of performing our work tasks.	1 2 3 4 5
4. My team doesn't expect to be known as a high-performing team.	1 2 3 4 5
15. Overall, my team performs well.	1 2 3 4 5
16. No task is too tough for my team.	1 2 3 4 5
17. My team has little influence in the organization.	1 2 3 4 5

PART B:

1. How would you describe the purpose (or mission) of your team?_____

_____

2. How long have you participated on any team? Please circle.

1) 0-6 months 2) 1-2 years 3) 3-5 years 4) 6-10 years 5) 10+ years

3. In total, how many teams have you been on? Please circle.

1) 1-3 teams 2) 4-6 teams 3) 7-10 teams 4) 10+ teams

(Part B continued)

1. How long have you worked for this company? Please circle.

1) 0-6 months 2) 1-2 years 3) 3-5 years 4) 6-10 years 5) 10+ years

2. What is the highest level of education you have completed? Please circle.

1) High school 2) Some college 3) Bachelor's degree 4) Advanced Degree

5) Other_____

3. How often does your team meet? Please circle.

1) Daily 2) 1 time per week 3) 2 or more times per week 4) 1 or 2 times per month

Circle general categories of measurements used to gauge your team's performance. Circle as many measures as appropriate.

7. Cycle Time	8. Quality	9. Quantity
10. Cost Control	11. Customer Satisfaction	12. Speed

13. List other performance measures used by your team:

_____ _____

14. Do any of your team's performance measures involve financial metrics? (Example: Cost savings; increased revenue)

Circle: YES NO

15. If yes, what are the financial metrics used?

_____ _____

16. Please circle the number of the description that best fits your team.

1. My team is newly formed, not yet united, and have a clearly established leader. Team members have individual work products and, as a result, are individually accountable for the result.

2. My team is confused over our purpose and goals. There is little communication and, often, conflicts erupt during discussions. There is little mutual accountability.

3. My team is establishing a common purpose and performance goals. Team members openly

1. My team has specific purpose and collective work products. We share leadership roles, are empowered and initiative comfortably. Team members encourage participation and share accountability.

5. My team has specific purpose and collective work products. We share leadership roles, are empowered and initiative comfortably. Team members encourage participation and share accountability. In addition, members are deeply committed to one another's personal growth and success.

PART C:

Directions: Below is a list of comments concerning support for your team. Please respond to each comment in two ways. First, rate how important that type of support is for getting your team's work done. Second, rate the extent that the item exists within your organization. Show your rating by circling the number on the scale.

Rating scale:

1 Strongly disagree
2 Disagree
3 Neither agree nor disagree
4 Agree
5 Strongly agree

Item	Rate how ***important*** this item is for your team to get their work done.	Rate the extent to which this item ***exists*** in your organization.
1. My company's managers/supervisors are open to different points of view.	1 2 3 4 5	1 2 3 4 5
2. My company's managers/supervisors help provide my team with the resources we need to perform work.	1 2 3 4 5	1 2 3 4 5
3. My managers/supervisors follow through with team recommendations in a timely manner.	1 2 3 4 5	1 2 3 4 5
4. My team has regularly planned performance reviews.	1 2 3 4 5	1 2 3 4 5
5. My team uses specific performance measurements to track our progress towards team goals.	1 2 3 4 5	1 2 3 4 5
6. My direct supervisor uses specific measurements for our team.	1 2 3 4 5	1 2 3 4 5
7. My team's performance measures are appropriate to our team's purpose.	1 2 3 4 5	1 2 3 4 5
8. My team can easily get training on communication skills.	1 2 3 4 5	1 2 3 4 5
9. My company uses multi-functional (cross-disciplinary) teams to integrate work.	1 2 3 4 5	1 2 3 4 5

(Part C continued)

Rating scale:

1 Strongly disagree
2 Disagree
3 Neither agree nor disagree
4 Agree
5 Strongly agree

Item	Rate how ***important*** this item is for your team to get their work done.	Rate the extent to which this item ***exists*** in your organization.
1. My team can easily get training on group meeting skills.	1 2 3 4 5	1 2 3 4 5
2. My team understands its purpose.	1 2 3 4 5	1 2 3 4 5
3. After we get more responsibilities, our team is recognized or rewarded in a timely manner.	1 2 3 4 5	1 2 3 4 5
4. After achieving goals, my team is recognized or rewarded in a timely manner.	1 2 3 4 5	1 2 3 4 5
5. My team is recognized or rewarded for additional effort.	1 2 3 4 5	1 2 3 4 5
6. My team is recognized or rewarded for improving work procedures.	1 2 3 4 5	1 2 3 4 5
7. My team can easily get training on decision-making skills.	1 2 3 4 5	1 2 3 4 5
8. My team has meetings with suppliers or customers to share information.	1 2 3 4 5	1 2 3 4 5
9. My team or representative meets with other teams to share information.	1 2 3 4 5	1 2 3 4 5
10. My team presents its recommendations to managers other than the team manager.	1 2 3 4 5	1 2 3 4 5
11. My team has the skills it needs to perform work well.	1 2 3 4 5	1 2 3 4 5
12. My team gets training when we need it.	1 2 3 4 5	1 2 3 4 5
13. My team's membership is appropriate for its mission or purpose.	1 2 3 4 5	1 2 3 4 5
14. My team has the authority it needs to perform its work	1 2 3 4 5	1 2 3 4 5
15. My team can easily collect, organize and sort information needed to perform our jobs.	1 2 3 4 5	1 2 3 4 5
16. My team can easily get information on business-unit goals, strategies, and priorities.	1 2 3 4 5	1 2 3 4 5
17. My team can easily get information about customers (internal or external).	1 2 3 4 5	1 2 3 4 5
18. My team can easily get information about our suppliers (internal or external).	1 2 3 4 5	1 2 3 4 5

Part D:

Directions: Read each item and determine to what degree the statement represents your team. Circle the appropriate number according to the following rating scale:

Scale: Rating scale:

1 Strongly disagree
2 Disagree
3 Neither agree nor disagree
4 Agree
5 Strongly agree

Statement	Rating
1. Team members have interchangeable and complimentary job skills and there is a extra sense of commitment to work as a team, and accomplish team goals.	1 2 3 4 5
2. Meetings are efficient and interactions are primarily to share information and best practices or perspectives.	1 2 3 4 5
3. Team members are considered valuable assets and appreciate the contributions others are making for the team.	1 2 3 4 5
4. There is a high degree of decision making, action and follow through.	1 2 3 4 5
5. There are no specific team performance goals, individual responsibilities or work products.	1 2 3 4 5
6. There is an atmosphere of consideration and mutual respect and team members are committed to the risk conflict and joint work products.	1 2 3 4 5
7. Team members have shared leadership roles.	1 2 3 4 5
8. There is a strong clearly focused leader and the group discusses, decides and delegates.	1 2 3 4 5
9. The desire and potential to shape team goals is present.	1 2 3 4 5
10. Team members are deeply committed to team goals and one another's personal growth and success.	1 2 3 4 5
11. Team members understand the benefits of a team approach and are moving in the direction of team building efforts.	1 2 3 4 5
12. There are active problem-solving meetings and discussions where planning, team goals, and work products are continually discussed.	1 2 3 4 5
13. There is ignorance as to the benefits of a team approach and little or no commitment toward team building.	1 2 3 4 5
14. Employees have individual job responsibilities and individual work products.	1 2 3 4 5
15. Performance is based on the sum of "Individual Bests' and rewards are based on individual performance.	1 2 3 4 5
16. Team performance goals and purpose are very specific and ambitious and continually strengthened through effective communication and team building.	1 2 3 4 5
17. Team members perform real work together and produce joint work products.	1 2 3 4 5
18. There is open discussion, problem-solving and goal setting at meetings.	1 2 3 4 5
19. There is mutual team accountability and collective work products.	1 2 3 4 5
20. Meetings are ineffective with very little open discussion, problem solving or goal setting.	1 2 3 4 5
Statement	**Rating**

21. Team members are unclear about each others' roles and responsibilities.	1 2 3 4 5
22. Team members feel highly motivated to give their best effort and feel the team experience and work is particularly rewarding.	1 2 3 4 5
23. There are individual work products and individual accountability.	1 2 3 4 5
24. The team refers to itself publicly as a "team" even though privately, its members will admit otherwise.	1 2 3 4 5
25. Team members have essential skills to accomplish team goals and are equally committed to a common purpose and working approach.	1 2 3 4 5
26. There are specific work products but only individual accountability.	1 2 3 4 5
27. Team members are committed and prepared to do real work together.	1 2 3 4 5
28. The work-products and results of the team's effort exceed all performance expectations and goals.	1 2 3 4 5
29. Employees are committed toward individual goals and there is no specific requirement to form a team.	1 2 3 4 5
30. There is little or no mutual accountability among team members for work products and members typically blame one another or the leader for the team's faults.	1 2 3 4 5

31. In the space below, please share any additional comments you would like to make regarding teamwork:

_____

_____

_____

_____

That's it! Thank you for your help!

APPENDIX F

Team Manager Survey

UNIVERSITY of NORTH TEXAS

College of Arts and Sciences
Department of Psychology
Interdisciplinary Center for the Study of Work Teams

Dear Team Manager,

We are asking for your help. The Center for the Study of Work Teams at the University of North Texas is involved in a multi-organization study of work teams and organizational support. The objective of this research project is to increase our understanding of the determinants of teams' success in meeting their goals.

Attached is a questionnaire that we would like you to complete. It asks a variety of questions concerning the team you supervise and your company. We hope that you will take a few minutes to complete this questionnaire. Your participation will help us to better understand what factors enable a team to succeed, as well as what factors hinder their success. A similar survey is being completed by a number of team members in your firm and in other organizations. The results of this project will be summarized and appropriate people within the University and your company will be given a summary report. This report is available to you if you would like a copy.

We emphasize that this is a research project. Your responses are confidential and we guarantee that your choice to participate and your responses will not be identified with you personally. In fact, we ask that you do not write your name on the questionnaire, we do not need to know who you are. Your participation is completely voluntary and you may withdraw at anytime without penalty or prejudice. There is no risk to you in participating.

Some terms used in this survey may be different from those used in your organization. For example, you may use the term 'work group' or 'crew'. However this survey uses the word 'team' and has the same meaning. Please refer to the following list while completing the survey. Please ask me if you need any further clarifications.

Survey uses:	Your word may be:
Team	Work group, Crew
Supervisor/Manager	Coach, Facilitator, Team Leader

If you have any questions, please contact one of us at the University of North Texas.

Thank you for your participation,

Michael M. Beyerlein
Director, Center for the Study of Work Teams
(940) 565-2654
beyerlei@unt.edu

Frances Kennedy
Graduate Student
(940) 565-3080
kennedy@COBAF.unt.edu

NOTE: This project has been reviewed by the UNT Committee for the protection of human subjects (940/565-3940).

PART A:

1. Name of Organization_____ 2. Team Name_____

3. Number of people on this team_____

4. How long have you supervised ***this*** team? Please circle.

1) 0-2 months 2) 3-11 months 3) 1-3 years 4) 4-6 years 5) 7-10 years 6) 10+ years

5. In total, how long have supervised teams? Please circle:

1) 0-2 months 2) 3-11 months 3) 1-3 years 4) 4-6 years 5) 7-10 years 6) 10+ years

6. Purpose / mission of team_____

_____

7. Which of the following best describes this team? Circle number.

    1. **Work Team:** Work teams are work units responsible for producing goods or providing services. Membership is usually on going and typically from the same function. Work cycles are continuous and repetitive. Examples of this type of team include production lines, maintenance teams, distribution teams and customer satisfaction teams.

    2. **Parallel Team:** Parallel teams are cross-functional teams used for problem-solving and improvement activities. Membership is on going and draws from different functions or departments whose work processes overlap. These teams co-exist with the members' home department responsibilities. The teams' objective is to analyze a process and make recommendations to management. Examples of parallel teams include scrap reduction teams, inventory accuracy teams and vendor certification teams.

    3. **Project Team:** Project teams are cross-function and used for problem solving. They differ from parallel teams in that they are brought together with a specific goal and, once achieved, they disband and return to their functional group. Examples of project teams include research and development, design, implementation and task forces.

Circle general categories of measurements used to gauge your team's performance. Circle as many measures as appropriate.

8. Cycle Time	9. Quality	10. Quantity
11. Cost Control	12. Customer Satisfaction	13. Speed

14. List other performance measures used by this team:

_____ _____

(Part 1 continued)

15. Are any of your team's performance measures involve financial metrics? (Example: Cost savings; increased revenue)

Circle: YES NO

16. If yes, what are they?

_____ _____

_____ _____

PART B:

Directions: Rate on a scale of one to five the extent to which each of the following statements describes your team. Indicate your rating by circling the appropriate number on the scale.

Rating scale:

1 Strongly disagree
2 Disagree
3 Neither agree nor disagree
4 Agree
5 Strongly agree

Statement	Rating
1. This team has produced high quality work.	1 2 3 4 5
2. This team believes it can be very productive.	1 2 3 4 5
3. This team has missed deadlines.	1 2 3 4 5
4. This team has little confidence in itself.	1 2 3 4 5
1. This team can get a lot of work done when it works hard.	1 2 3 4 5
1. This team has never spent over its budget limit.	1 2 3 4 5
2. This team believes it can become unusually good at producing high-quality work.	1 2 3 4 5
3. This team feels it can solve any problem it encounters.	1 2 3 4 5
4. This team has not developed new methods of performing our work tasks.	1 2 3 4 5
5. This team doesn't expect to be known as a high-performing team.	1 2 3 4 5
6. Overall, this team performs well.	1 2 3 4 5
7. No task is too tough for this team.	1 2 3 4 5
8. This team has little influence around here.	1 2 3 4 5

PART C:

Directions: Below is a list of comments concerning support for the team you supervise. Please rate how important you think that type of support is for the team you supervise to get their work done. Show your rating by circling the number on the scale.

Rating scale:

1 Strongly disagree
2 Disagree
3 Neither agree nor disagree
4 Agree
5 Strongly agree

Item It is important that . . .	Rate how ***important*** you think this item is for the team you manage to get their work done.
1. Managers are open to different points of view.	1 2 3 4 5
1. Managers help provide this team with the resources they need to perform work.	1 2 3 4 5
2. Managers follow through with team recommendations in a timely manner.	1 2 3 4 5
3. The team has regularly planned performance reviews.	1 2 3 4 5
4. The team uses specific performance measurements to track team goals.	1 2 3 4 5
5. The direct supervisor uses specific measurements for our team.	1 2 3 4 5
6. Performance measures are appropriate to the team's purpose.	1 2 3 4 5
7. This team can easily get training on communication skills.	1 2 3 4 5
8. This team can easily get training on decision-making skills.	1 2 3 4 5
9. This team can easily get training on group meeting skills.	1 2 3 4 5
10. This team gets training when we need it.	1 2 3 4 5
11. This team is recognized or rewarded in a timely manner after they get more responsibilities,.	1 2 3 4 5
12. This team is recognized or rewarded in a timely manner after achieving goals.	1 2 3 4 5
13. This team is recognized or rewarded for additional effort.	1 2 3 4 5
14. This team is recognized or rewarded for improving work procedures.	1 2 3 4 5
15. The company uses multi-functional (cross-disciplinary) teams to integrate work.	1 2 3 4 5
16. The team has meetings with suppliers or customers to share information.	1 2 3 4 5

(Part C continued)

1. The team or representative meets with other teams to share information.	1 2 3 4 5
2. The team presents its recommendations to managers.	1 2 3 4 5
3. The team has the skills it needs to perform work well.	1 2 3 4 5
4. The team understands its purpose.	1 2 3 4 5
5. Team membership is appropriate for its mission or purpose.	1 2 3 4 5
6. The team has the authority it needs to perform its work.	1 2 3 4 5
7. The team can easily collect, organize and sort information needed to perform its jobs.	1 2 3 4 5
8. The team can easily get information on business-unit goals, strategies, and priorities.	1 2 3 4 5
9. The team can easily get information about customers (internal or external).	1 2 3 4 5
10. The team can easily get information about our suppliers (internal or external).	1 2 3 4 5

Thank you very much for your help!

APPENDIX G

Content Validity Instrument

(E-Mail Content)

At the Center for the Study of Work teams, we are launching a study of how teams add value to the bottom line. We are exploring the direct and indirect effects of support systems on team performance and are measuring that performance using a financial measure.

A key aspect of this study is a solid set of support systems characteristics to use as an instrument. Dr. Mike Beyerlein has recommended you as a very knowledgeable source with respect to support systems for teams. Your opinion on the appropriateness of these items would be much appreciated.

Attached is a tabular list of 27 characteristics used to measure support systems. Please take a moment to indicate your judgment on each in the appropriate column.

I designed this query such that you can answer directly in the file and resend to me.

Thank you very much for your assistance,

Frances Kennedy

Instructions: Please place an 'X' in the appropriate column indicating the extent to which each item is an essential measure of the support system. The measurement goal of each is noted in parentheses following the support system named in the first column.

These items are written from the team member's perspective. Therefore, 'my company' and 'my team' are spoken by the team member.

KEY: **'Essential'** – "This item is an essential characteristic of this support system."
'Useful, but not essential' – "This item is a useful characteristic, but not essential to this support system."
'Not necessary' -- "This item is not a necessary characteristic of this support system."

Management and Supervisor Support: (Measures implementation of projects; timely implementation; encourages success, and listens and responds to resource needs.)	**Essential**	**Useful, but not essential**	**Not necessary**
1. My company's managers/supervisors are open to multiple perspectives (such as different points of view).			
2. My company's managers/supervisors help provide my team with the resources we need to perform work.			
3. My managers/supervisors follow through with team recommendations in a timely manner.			

Performance Measurement: (Measures are available and are used by both team and managers. Feedback is timely and appropriate to team purpose.)	**Essential**	**Useful, but not essential**	**Not necessary**
1. My team has regularly planned performance reviews.			
2. My team uses specific performance measurements to track team goals.			
3. My direct supervisor uses specific measurements for our team.			
4. My team's performance measures are appropriate to our team's purpose.			

Training Systems: (Measures recognition of needs and the ease with which the teams receive it.)	**Essential**	**Useful, but not essential**	**Not necessary**
1. My team can easily get training on communication skills.			
2. My team can easily get training on decision-making skills.			
3. My team can easily get training on group meeting skills.			
4. My team gets training when we need it.			

Reward System: (Measures reward for effort, ties to performance measures and successes, and whether the reward (recognition) is timely.)	**Essential**	**Useful, but not essential**	**Not necessary**
1. After we get more responsibilities, our team gets rewarded, or is recognized in a timely manner.			
2. After achieving goals, my team is paid, or is recognized, in a timely manner.			
3. My team gets more pay, or is recognized, for additional effort.			
4. My team is paid more, or is recognized, for improving work procedures.			

Integration System: (Measures sharing successes through informal and formal methods.)	**Essential**	**Useful, but not essential**	**Not necessary**
1. My company uses multi-functional (cross-disciplinary) teams to integrate work.			
2. My team has meetings with suppliers or customers to share information.			
3. My team or representative meets with other teams to share information.			
4. My team presents its recommendations to managers.			

Group Design: (Measures appropriate mix of people and skills, the extent to which the team understands their purpose, and whether the team has the authority needed for their purpose.)	**Essential**	**Useful, but not essential**	**Not necessary**
1. My work group has the skills it needs to perform work well.			
2. My team understands its purpose			
3. My team's membership is appropriate for its mission or purpose.			
4. My team has the authority it needs to perform its work			

Information System: (Measures internal information processes and external information processes.)	**Essential**	**Useful, but not essential**	**Not necessary**
1. My team can easily collect, organize and sort information needed to perform our jobs.			
2. My team can easily get information on business-unit goals, strategies, and priorities.			
3. My team can easily get information about customers (internal or external).			
4. My team can easily get information about our suppliers (internal or external).			

Thanks very much for your help! Please add any comments concerning the above items.

COMMENTS:

SUPPORT SYSTEMS' EXPERTS

Each of the following experts will receive an e-mail request to complete the content validity survey:

Sue Freedman
Independent Consultant
Former Organizational Development Manager with Texas Instruments
And Vice-President of Human Resource with a real estate firm

James Barker
Professor of Organization Communications
Airforce Academy

Dr. Eric Sundstrom
Department of Psychology
University of Tennessee
Author of Supporting Work Team Effectiveness (1999)

Ms. Toni Coffee
VP of Employee Involvement
Southwestern Bell Telephone

John Gilberti
VP of Operations
American Financial Services

APPENDIX H

COMPANY 'A' SUMMARY -- 1 of 2
Sorted by Team Number

		Operational Measures[1,4]						Financial Measures[2]		Perceptual Measures			Support Systems
Team Number	Stage	Cycle Time	Quality	Quantity	Cost Control	Customer Satisfaction	Speed	Financial Measures	TEF	Team Potency	Perf (Team)	Perf (Mgr)	Average Gap
1	4	80% M	90% M	70% M	50% M	70% M	80% M	40%	12.9	4.54	4.06	4.00	(0.11)
2	5	100% M	100% M	50% M	100% M	100% M	100% M	100%		4.75	4.90	4.00	(0.06)
3	4	77%	85% M	77% M	15% M	92% M	46% M	46% M		4.39	4.10	4.20	(0.77)
4	4	100% M	100% M	100%	0%	100% M	75%	0% M		4.16	3.45	4.80	(0.44)
5	5	80% M	100% M	100% M	40%	100% M	80%	40% M		4.85	3.96	3.60	(0.53)
6	4	100% M	100% M	40% M	0%	100% M	40% M	0% M		4.15	4.08	4.20	(0.75)
7	5	57% M	57% M	57% M	14%	43% M	43% M	14%		4.73	3.90	3.60	(0.34)
8	4	100% M	67% M	67% M	33% M	100% M	67% M	0% M		4.63	3.93	3.40	(1.22)
9	2	33%	100% M	100% M	33% M	50% M	83%	50%		3.74	3.67	3.80	(0.44)
10	5	75%	100%	75%	25%	75%	75%	50%		4.78	4.45	-	(0.45)
11	4	80%	80% M	40% M	0%	60% M	80% M	80%		4.35	4.20	4.20	(0.48)
12	2	100% M	62% M	38% M	88% M	50% M	100% M	38%		3.94	3.38	4.20	(0.54)
13	4	100% M	100% M	100% M	100% M	100% M	100%	67% M	17.8	4.27	3.70	3.80	(0.34)
14	3	100% M	75% M	75%	50% M	75% M	0%	50% M		4.41	3.45	2.40	(0.33)
15	5	100% M	100% M	60% M	60% M	100% M	100% M	80%		4.48	4.40	4.20	(0.08)
All Teams		85%	91%	74%	37% M	85% M	70%	40%		4.41	3.98	3.89	(0.46)
Percent of Managers		79%	100%	86%	64%	100%	64%	50%					

[1]Operational Measures present the percent of team members selecting a specific measure.

[2]Financial Measure presents the percent of team members that say they have financial measures.
TEF is the calculated factor for the team.

[3]Support Systems presents the average of the four gap measures (TRNGgap + REWgap + COMgap + DMgap)/4

[4]'M' designates measures the team manager selected.

COMPANY 'A' SUMMARY – 2 of 2
Sorted by Team Potency

		Operational Measures[1]						Financial Measures[2]		Perceptual Measures			Support Systems
Team Number	Stage	Cycle Time	Quality	Quantity	Cost Control	Customer Satisfaction	Speed	Financial Measures	TEF	Team Potency	Perf (Team)	Perf (Mgr)	Average Gap
5	5	80%	100%	100%	40%	100%	80%	40%		4.85	3.96	3.60	(0.53)
10	5	75%	100%	75%	25%	75%	75%	50%		4.78	4.45	-	(0.45)
2	5	100%	100%	50%	100%	100%	100%	100%		4.75	4.90	4.00	(0.06)
7	5	57%	57%	57%	14%	43%	43%	14%		4.73	3.90	3.60	(0.34)
8	4	100%	67%	67%	33%	100%	67%	0%		4.63	3.93	3.40	(1.22)
1	4	80%	90%	70%	50%	70%	80%	40%	12.9	4.54	4.06	4.00	(0.11)
15	5	100%	100%	60%	60%	100%	100%	80%		4.48	4.40	4.20	(0.08)
14	3	100%	75%	75%	50%	75%	0%	50%		4.41	3.45	2.40	(0.33)
3	4	77%	85%	77%	15%	92%	46%	46%		4.39	4.10	4.20	(0.77)
11	4	80%	80%	40%	0%	60%	80%	80%		4.35	4.20	4.20	(0.48)
13	4	100%	100%	100%	100%	100%	100%	67%	17.8	4.27	3.70	3.80	(0.34)
4	4	100%	100%	100%	0%	100%	75%	0%		4.16	3.45	4.80	(0.44)
6	4	100%	100%	40%	0%	100%	40%	0%		4.15	4.08	4.20	(0.75)
12	2	100%	62%	38%	88%	50%	100%	38%		3.94	3.38	4.20	(0.54)
9	2	33%	100%	100%	33%	50%	83%	50%		3.74	3.67	3.80	(0.44)
All Teams		85%	91%	74%	37%	85%	70%	40%		4.41	3.98	3.89	(0.46)

[1]Operational Measures present the percent of team members selecting a specific measure.

[2]Financial Measure presents the percent of team members that say they have financial measures.
TEF is the calculated factor for the team.

[3]Support Systems presents the average of the four gap measures (TRNGgap + REWgap + COMgap + DMgap)/4

COMPANY A – TEAM 1 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Parallel Team
STAGE:	Real Team (4)
NUMBER OF SURVEYS:	10
AVERAGE MONTHS ON TEAM:	16.1

EDUCATION LEVEL:

High School	1
Some College	6
Bachelor's Degree	3
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.06)
Communications	0
Design/Measurement	(0.12)
Training	(0.26)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.54	4.06
Managers	4.75	4.00

MEETING FREQUENCY:

Daily	2
1 time per week	4
2 or more times per week	3
1 or 2 times per month	1

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- To provide accurate, timely real estate information to customers with a high level of customer satisfaction.

Members:
- To produce the best quality and accuracy
- To complete work for our customers in an accurate and efficient manner
- To exceed customer expectations
- Our mission of the … team is to meet all the deadlines we put in front of us
- To provide correct and timely information to our customers and support each other
- To report tax information to our customers correctly and in a timely manner
- To provide correct parcel ID's and r/e tax amounts and provide customer service to our banks
- To provide the most accurate information possible in a timely manner

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- Compared to my last company where your input did not matter, this company is a joy to work for and I strive to make them proud and to satisfy my personal goals.
- I enjoy being on a team.
- It works well?
- Teamwork is when all team members help each other and respect each other, with no jealousy (we are a team) "like one"

COMPANY A – TEAM 1 SNAPSHOT

PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.			
Cycle Time	8M	Quality	9M
Quantity	7M	Cost Control	5M
Customer Satisfaction	7M	Speed	8M
List other performance measures used by your team:			
Manager: º No response			
Members: º Accuracy º Overall performance			

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?
YES 4 NO 6 M
If yes, what are they?
Manager: º No response
Members: º Using contract workers and temps º Cost savings º Decrease road trips º In house search tools

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF
$68,144 / $5,250 = 12.9

COMPANY A – TEAM 2 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Parallel Team
STAGE:	High Perf Team (5)
NUMBER OF SURVEYS:	4
AVERAGE MONTHS ON TEAM:	7.0

EDUCATION LEVEL:

High School	2
Some College	2
Bachelor's Degree	0
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.02)
Communications	(0.13)
Design/Measurement	(0.07)
Training	0

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.75	4.90
Managers	4.88	4.00

MEETING FREQUENCY:

Daily	2
1 time per week	0
2 or more times per week	2
1 or 2 times per month	0

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- To provide customers (banks) with timely and accurate information

Members:
- Excellent
- To produce the best product for our customers in the least amount of time and effort.

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- Over the last 5 years, I have discovered that the attitude of the team leader reflects the attitude of the team. That is, a laid back/relaxed team leader generally has a more committed team. A domineering/dictating team leader produces a rebellious team.

COMPANY A – TEAM 2 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.			
Cycle Time	4M	Quality	2M
Quantity	2M	Cost Control	4M
Customer Satisfaction	4M	Speed	4M
List other performance measures used by your team:			
Manager: º Employee satisfaction			
Members: º Overtime - used or not used. overnights - needed or not			

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?
YES 4 NO 0 M
If yes, what are they?
Manager: º no response
Members: º no response

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF
n/a

COMPANY A – TEAM 3 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Real Team (4)
NUMBER OF SURVEYS:	13
AVERAGE MONTHS ON TEAM:	10.9

EDUCATION LEVEL:

High School	1
Some College	5
Bachelor's Degree	5
Advanced Degree	0
Other	2

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(1.33)
Communications	(0.55)
Design/Measurement	(0.54)
Training	(0.66)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.39	4.10
Managers	4.88	4.20

MEETING FREQUENCY:

Daily	10
1 time per week	2
2 or more times per week	1
1 or 2 times per month	0

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- To process claims, exceeding customers expectations in turnaround time and efficiency, while recovering all possible money for first American.

Members:
- To process claims and get them back to customer on time
- To produce a quality product that satisfies the customer beyond their expectations
- Always meet our goals and keep on improving
- To process claims within 30 days and to recover as much money as possible
- To discover any problems concerning a contract or agency and to rectify it so no future claims come in
- Evaluate and make decisions as to customer requests for reimbursement, based on the evaluation of facts
- To complete all work within a 30 day time period
- To accurately timely complete claims for first American
- To identify and correct errors made by searching / processing teams within the organization
- Customer focused cleanup of our database

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

No comments

COMPANY A – TEAM 3 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.			
Cycle Time	10	Quality	11M
Quantity	10M	Cost Control	2M
Customer Satisfaction	12M	Speed	6M
List other performance measures used by your team:			
Manager: º Recovery rate			
Members: º no response			

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?
YES 6 M NO 5
If yes, what are they?
Manager: º Inconsistency in work, recovery rate of funds received (historically)
Members: º No response

TEAM EFFECTIVENESS FACTOR (TEF)

Benefits / Cost = TEF

n/a

COMPANY A – TEAM 4 SNAPSHOT

PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Real Team (4)
NUMBER OF SURVEYS:	4
AVERAGE MONTHS ON TEAM:	13.8

EDUCATION LEVEL:

High School	1
Some College	2
Bachelor's Degree	1
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.25)
Communications	(0.50)
Design/Measurement	(0.43)
Training	(0.58)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.16	3.45
Managers	4.13	4.80

MEETING FREQUENCY:

Daily	0
1 time per week	0
2 or more times per week	4
1 or 2 times per month	0

QUESTION: How would you describe the purpose/mission of your team?

Manager:

- To produce a high quality product to our customers while maintaining an excellent service

Members:

- Delivery of tax amounts to the customer in a timely manner

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- No response

COMPANY A – TEAM 4 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.			
Cycle Time	4 M	Quality	4M
Quantity	4	Cost Control	0
Customer Satisfaction	4M	Speed	3
List other performance measures used by your team:			
Manager: Turnaround times			
Members: º No response			

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?
YES 0 M NO 4
If yes, what are they?
Manager: º Turnaround times and cycle deadlines - avoid paying company losses
Members: º No response

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF

n/a

COMPANY A – TEAM 5 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	High Perf Team (5)
NUMBER OF SURVEYS:	5
AVERAGE MONTHS ON TEAM:	26.4

EDUCATION LEVEL:

High School	2
Some College	1
Bachelor's Degree	2
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.49)
Communications	(0.40)
Design/Measurement	(0.28)
Training	(0.93)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.85	3.96
Managers	4.25	3.60

MEETING FREQUENCY:

Daily	4
1 time per week	0
2 or more times per week	0
1 or 2 times per month	0

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- To process and report tax information accurately and timely

Members:
- To help our company in any situation or at any cost
- Good customer relations results in higher quality work
- To offer excellent customer service, a high quality product and make necessary the way
- To give our customers a high-quality product in a timely manner
- To produce quality work and get the product to our customers

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- No response

COMPANY A – TEAM 5 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.			
Cycle Time	4M	Quality	5M
Quantity	5M	Cost Control	2
Customer Satisfaction	5M	Speed	4
List other performance measures used by your team:			
Manager: º Statisticals for reporting events			
Members: º Improvements			

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?
YES 2 M NO 2
If yes, what are they?
Manager: º Temporary expenses º TSP files º supplies
Members: º Efficiency º Avoid penalties and late payments º Avoid penalties and late payments

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF

n/a

COMPANY A – TEAM 6 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Real Team (4)
NUMBER OF SURVEYS:	5
AVERAGE MONTHS ON TEAM:	17.8

EDUCATION LEVEL:

High School	3
Some College	0
Bachelor's Degree	2
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(1.08)
Communications	(0.40)
Design/Measurement	(0.17)
Training	(1.33)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.15	4.08
Managers	4.75	4.20

MEETING FREQUENCY:

Daily	0
1 time per week	1
2 or more times per week	0
1 or 2 times per month	4

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- This team handles 4 out of 9 states. Our purpose is to provide great customer service and meet all cycle deadlines, as well as helping other teams

Members:
- Keep customers happy
- To be the best at customer service and to always strive for more
- To get all work done in a timely manner and be correct
- To complete tasks on time - to help other teams when in need
- To service all our customers and answer their questions no matter how small

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- Teamwork is fine but most performance reviews are based on individual performance

COMPANY A – TEAM 6 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.
Cycle Time 5M Quality 5M Quantity 2M Cost Control 0 Customer Satisfaction 5M Speed 2M
List other performance measures used by your team:
Manager: º Versatility
Members: º No responses

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?
YES 0 M NO 5
If yes, what are they?
Manager: º Travel expenses for searches º Poor quality leads to claims
Members: º No responses

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF

n/a

COMPANY A – TEAM 7 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	High Perf Team (5)
NUMBER OF SURVEYS:	7
AVERAGE MONTHS ON TEAM:	39

EDUCATION LEVEL:

High School	0
Some College	4
Bachelor's Degree	0
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.80)
Communications	(0.04)
Design/Measurement	(0.25)
Training	(0.35)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.73	3.90
Managers	4.63	3.60

MEETING FREQUENCY:

Daily	1
1 time per week	1
2 or more times per week	1
1 or 2 times per month	1

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- Report current and delinquent taxes for each of our states in as quick and efficient a manner as possible

Members:
- To complete our jobs in a timely matter with accurate information
- We together to achieve a common goal - success!!!
- To help our customers get satisfactory work completed in time
- Get work done in a timely manner

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- One of the things I feel brings my team together is we are all comfortable with common interests and goals. I think it helps make our team!!!

COMPANY A – TEAM 7 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.			
Cycle Time	4M	Quality	4M
Quantity	4M	Cost Control	1
Customer Satisfaction	3M	Speed	3M
List other performance measures used by your team:			
Manager: º No response			
Members: º Cost savings º Increased Revenue			

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?
YES 1 NO 3 M
If yes, what are they?
Manager: º No response
Members: º No response

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF

0.0

COMPANY A – TEAM 8 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Real Team (4)
NUMBER OF SURVEYS:	3
AVERAGE MONTHS ON TEAM:	29

EDUCATION LEVEL:

High School	1
Some College	2
Bachelor's Degree	0
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(1.87)
Communications	(1.05)
Design/Measurement	(0.72)
Training	(1.22)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.63	3.93
Managers	4.00	3.40

MEETING FREQUENCY:

Daily	1
1 time per week	2
2 or more times per week	0
1 or 2 times per month	0

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- To provide quality tax amount reporting service to our customers

Members:
- To complete all tax reporting / delinquency reporting service to our customers established guidelines
- Goal oriented. We always have team input as to direction our team is going
- Customer satisfaction with IL/WIS tax reporting

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- No response

COMPANY A – TEAM 8 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.			
Cycle Time	3M	Quality	2M
Quantity	2M	Cost Control	1M
Customer Satisfaction	3M	Speed	2M
List other performance measures used by your team:			
Manager: º No response			
Members: º Scheduling º Responsibility			

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?
YES 0 M NO 3
If yes, what are they?
Manager: º Quality / Quantity º Reduce claims - reduce travel
Members: º No response

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF

n/a

COMPANY A – TEAM 9 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Pseudo Team (2)
NUMBER OF SURVEYS:	6
AVERAGE MONTHS ON TEAM:	19.2

EDUCATION LEVEL:

High School	2
Some College	3
Bachelor's Degree	1
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.94)
Communications	0
Design/Measurement	(0.36)
Training	(0.44)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	3.74	3.67
Manager	4.88	3.80

MEETING FREQUENCY:

Daily	0
1 time per week	3
2 or more times per week	0
1 or 2 times per month	3

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- To procure tax ID and amounts for customers to set up their tax brackets

Members:
- To set property information and taxes to the mortgage companies on time purpose of your team - work hard and get accurate information
- To ID parcels and secure tax amounts as well as find tax delinquencies
- To complete all work ahead of its due date while making sure its absolutely accurate
- To provide accurate information to the company on a timely basis
- To provide accurate information in a certain time frame to be reported to the customer

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- There are individuals who practice self interests over team - and can't be trusted

COMPANY A – TEAM 9 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.
Cycle Time 2 Quality 6M Quantity 6M Cost Control 2M Customer Satisfaction 3M Speed 3
List other performance measures used by your team:
Manager: º No response
Members: º Website. PLS º Keying info. into system

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?
YES 3 NO 3 M
If yes, what are they?
Manager: º No response
Members: º Use website º Save money on calls º Completion of work º More parcel nos. found company makes more money

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF

n/a

COMPANY A – TEAM 10 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	High Perf Team (5)
NUMBER OF SURVEYS:	4
AVERAGE MONTHS ON TEAM:	22.0

EDUCATION LEVEL:

High School	0
Some College	3
Bachelor's Degree	1
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.65)
Communications	(0.21)
Design/Measurement	(0.18)
Training	(0.75)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.76	4.45
Managers	---	---

MEETING FREQUENCY:

Daily	0
1 time per week	1
2 or more times per week	3
1 or 2 times per month	0

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- No response

Members:
- To gather information in an automated vs. manual
- Automated tax reporting
- To gather new automation and to send the information out to agencies
- Data procurement and manipulation

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- No response

COMPANY A – TEAM 10 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.			
Cycle Time	3	Quality	4
Quantity	3	Cost Control	1
Customer Satisfaction	3	Speed	3
List other performance measures used by your team:			
Manager: º No response			
Members: º Attention to detail			

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?
YES 2 NO 1
If yes, what are they?
Manager: º No response
Members: º Cost control º File costs vs. keying manually

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF

n/a

COMPANY A – TEAM 11 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	4
NUMBER OF SURVEYS:	5
AVERAGE MONTHS ON TEAM:	10.3

EDUCATION LEVEL:

High School	3
Some College	2
Bachelor's Degree	0
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	1.00
Communications	0.37
Design/Measurement	0.34
Training	0.20

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.35	4.20
Managers	4.25	4.20

MEETING FREQUENCY:

Daily	1
1 time per week	1
2 or more times per week	0
1 or 2 times per month	3

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- Provide highest quality tax amount reporting; meeting department production and quality standards

Members:
- Works well together
- I think team work is very important for our team and that's where the production starts (of checks)
- All deadlines are met and completed in the time allowed
- Our team is one of the most important parts in getting the work completed to be able to process
- Our team gets all its tasks done in order for other teams to complete their payments

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- As a team that means everyone should work together and when you have one person not pulling their load it makes it hard for other team members to work efficiency

COMPANY A – TEAM 11 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.			
Cycle Time	4	Quality	4M
Quantity	2M	Cost Control	0
Customer Satisfaction	3M	Speed	4M
List other performance measures used by your team:			
Manager: º No response			
Members: º Keeping up with all incoming checks º Accuracy			

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?
YES 0 NO 4 M
If yes, what are they?
Manager: º No response
Members: º Team Effectiveness Factor (TEF)

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF

n/a

COMPANY A – TEAM 12 SNAPSHOTS
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	2
NUMBER OF SURVEYS:	8
AVERAGE MONTHS ON TEAM:	18.5

EDUCATION LEVEL:

High School	2
Some College	4
Bachelor's Degree	1
Advanced Degree	0
Other	1

SUPPORT SYSTEM DEFFICIENCY:

Rewards	0.60
Communications	0.02
Design/Measurement	0.41
Training	1.13

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	3.94	3.38
Managers	4.88	4.20

MEETING FREQUENCY:

Daily	2
1 time per week	0
2 or more times per week	2
1 or 2 times per month	4

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- To have good quality while proving our customers with timely packages; report and pay property taxes within ELD. Provide a quality product to customers

Members:
- To process bills for homeowners
- To satisfy our customers 100%
- There seems to be none
- To prepare services requested to the satisfaction all our customers
- To meet deadlines and goals and exceed department norms
- To meet all deadlines and ELD's in a timely manner and also produce quality work
- I would say that our purpose is to meet deadlines no matter how hard
- Meet goals and deadlines of customers asking tax payments

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- According to team members' title, that person should be responsible for the work that is expected of them. Supervisor should not play favorites!
- We need more people to focus on the problems and not the other person
- I am fairly new to company but I can tell we have a lot of work to do to become a closer team

PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.			
Cycle Time	8M	Quality	5M
Quantity	3M	Cost Control	7M
Customer Satisfaction	4M	Speed	8M
List other performance measures used by your team:			
Manager: º No response			
Members: º Self - evaluations º Teamwork			

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?
YES 3 NO 5 M
If yes, what are they?
Manager: º No response
Members: º Economics loss date (old) = saves money º Cost savings º Increase revenue

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF

n/a

COMPANY A – TEAM 13 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	4
NUMBER OF SURVEYS:	6
AVERAGE MONTHS ON TEAM:	39

EDUCATION LEVEL:

High School	4
Some College	2
Bachelor's Degree	0
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	0.57
Communications	0.34
Design/Measurement	0.26
Training	0.17

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.27	3.70
Managers	4.75	3.80

MEETING FREQUENCY:

Daily	6
1 time per week	0
2 or more times per week	0
1 or 2 times per month	0

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- Report tax payment information based on published cycle completion dates (EOC)

Members:
- Hard working to meet deadlines and produce a good product for our customers
- To work together to reach the same goals
- Facilitate and monitor the reporting of property taxes
- To produce quality work in a timely manner
- We try to meet all requirements that makes our customers happy or satisfied

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- Teamwork is something you and your group do together. Teamwork is something feel every corporation needs

COMPANY A – TEAM 13 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.			
Cycle Time	6M	Quality	6M
Quantity	6M	Cost Control	6M
Customer Satisfaction	6M	Speed	6
List other performance measures used by your team:			
Manager: º No response			
Members: º No response			

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?
YES 4 M NO 2
If yes, what are they?
Manager: º No response
Members: º Overtime º Paperwork º Speed º More work done º Keep customers º Cost control

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF

$5,864 / $329 = 17.8

COMPANY A– TEAM 14 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	3
NUMBER OF SURVEYS:	4
AVERAGE MONTHS ON TEAM:	27.3

EDUCATION LEVEL:

High School	2
Some College	1
Bachelor's Degree	0
Advanced Degree	0
Other	1

SUPPORT SYSTEM DEFFICIENCY:

Rewards	0.60
Communications	0.13
Design/Measurement	0.18
Training	0.42

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.41	3.45
Managers	4.75	2.40

MEETING FREQUENCY:

Daily	2
1 time per week	1
2 or more times per week	0
1 or 2 times per month	1

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- To complete order requests accurately and timely to customers

Members:
- To do our best for our customers
- To timely and accurately report payment status, lien info and general information on properties to our customers
- Our mission is to produce quality work and provide the customer with adequate information that's needed input job
- Our purpose is to ensure that checks and detail are keyed and distributed to the teams in order for payments to be disbursed

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- Teaming as a whole is VERY new to us. However, I feel that its the best thing for us
- Every professional company should try the team concept. I think it's great and allows the team members to participate and contribute to success.

COMPANY A – TEAM 14 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.			
Cycle Time	4M	Quality	3M
Quantity	3	Cost Control	2M
Customer Satisfaction	3M	Speed	1
List other performance measures used by your team:			
Manager: º Delight (customers) º At this time, the ones that are circled are the ones that apply			
Members: º No response			

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?
YES 2 M NO 2
If yes, what are they?
Manager: º No response
Members: º Errors in data entry º Cost cut back on some things that are being used etc., paper, reportings

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF

n/a

COMPANY A – TEAM 15 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	5
NUMBER OF SURVEYS:	5
AVERAGE MONTHS ON TEAM:	14.6

EDUCATION LEVEL:

High School	3
Some College	1
Bachelor's Degree	1
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	0.28
Communications	0.03
Design/Measurement	0
Training	0

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.48	4.40
Managers	4.75	4.40

MEETING FREQUENCY:

Daily	5
1 time per week	0
2 or more times per week	0
1 or 2 times per month	0

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- Successful tax cycles; receive and balance customer tax payment department goals and norms

Members:
- To be fast, accurate and give the best service
- This team is a good team to work with the people are very nice and willing to help each other
- To be the best
- To take care of the customers need in an accurate and efficient manner

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- We do look at ourselves as team members but some of our work is individual, but the work of the team is teamwork

COMPANY A – TEAM 15 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.			
Cycle Time	5M	Quality	3M
Quantity	3M	Cost Control	3M
Customer Satisfaction	5M	Speed	5M
List other performance measures used by your team:			
Manager: º No response			
Members: º Knowledge, º Leadership º Attendance º Communication º Quality			

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?
YES 1 NO 4
If yes, what are they?
Manager: º No response
Members: º We try not to incur due to late reporting º TEF n/a

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF

0.0

APPENDIX I

COMPANY 'B' SUMMARY
Sorted by Team Number

		Operational Measures[1,4]						Financial Measures[2]		Perceptual Measures			Support Systems
Team Number	Stage	Cycle Time	Quality	Quantity	Cost Control	Customer Satisfaction	Speed	Financial Measures	TEF	Team Potency	Perf (Team)	Perf (Mgr)	Average Gap
1	4	50%	50%	50%	0%	100%	50%	50%	-	3.44	3.60	-	(0.10)
2	4	69%	85% M	62%	69%	92% M	62% M	31%	-	4.00	3.83	4.60	(0.34)
3	3	40%	100% M	20%	20%	80% M	0% M	80% M	-	3.73	3.92	3.60	(0.08)
4	5	33%	100%	0%	0%	100%	33%	67%	-	4.20	3.93	-	(0.21)
5	4	25%	88% M	50%	63%	100% M	75%	88%	-	4.25	3.95	3.75	(0.43)
6	3	10%	90% M	20%	10%	50% M	0%	0%	-	3.49	3.30	3.20	(0.30)
7	4	0%	100%	0%	0%	100% M	0%	50%	-	3.94	3.60	4.00	(0.40)
8	4	50%	67%	17%	50%	67%	17%	17%	-	3.81	3.60	4.20	(0.20)
All Teams		38%	85%	34%	36%	83%	34%	42%		3.86	3.72	3.89	(0.26)
Percent of Managers		0%	80%	0%	0%	100%	40%	20%					

[1]Operational Measures present the percent of team members selecting a specific measure.

[2]Financial Measure presents the percent of team members that say they have financial measures.
TEF is the calculated factor for the team.

[3]Support Systems presents the average of the four gap measures (TRNGgap + REWgap + COMgap + DMgap)/4

[4]'M' designates measures the team manager selected.

COMPANY 'B' SUMMARY
Sorted by Team Potency

		Operational Measures[1]						Financial Measures[2]		Perceptual Measures			Support Systems
Team Number	Stage	Cycle Time	Quality	Quantity	Cost Control	Customer Satisfaction	Speed	Financial Measures	TEF	Team Potency	Perf (Team)	Perf (Mgr)	Average Gap
5	4	25%	88%	50%	63%	100%	75%	88%	-	4.25	3.95	3.75	(0.43)
4	5	33%	100%	0%	0%	100%	33%	67%	-	4.20	3.93	-	(0.21)
2	4	69%	85%	62%	69%	92%	62%	31%	-	4.00	3.83	4.60	(0.34)
7	4	0%	100%	0%	0%	100%	0%	50%	-	3.94	3.60	4.00	(0.40)
8	4	50%	67%	17%	50%	67%	17%	17%	-	3.81	3.60	4.20	(0.20)
3	3	40%	100%	20%	20%	80%	0%	80%	-	3.73	3.92	3.60	(0.08)
6	3	10%	90%	20%	10%	50%	0%	0%	-	3.49	3.30	3.20	(0.30)
1	4	50%	50%	50%	0%	100%	50%	50%	-	3.44	3.60	-	(0.10)
All Teams[4]		38%	85%	34%	36%	83%	34%	42%					

[1]Operational Measures present the percent of team members selecting a specific measure.

[2]Financial Measure presents the percent of team members that say they have financial measures.
TEF not calculated for this company.

[3]Support Systems presents the average of the four gap measures (TRNGgap + REWgap + COMgap + DMgap)/4

COMPANY B – TEAM 1 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	4
NUMBER OF SURVEYS:	4
AVERAGE MONTHS ON TEAM:	10.0

EDUCATION LEVEL:

High School	0
Some College	2
Bachelor's Degree	2
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	0.40
Communications	0
Design/Measurement	0
Training	0

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	3.40	3.60
Managers	---	---

MEETING FREQUENCY:

Daily	0
1 time per week	0
2 or more times per week	0
1 or 2 times per month	4

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- n/a

Members:
- To provide system delivery to client in a timely manner
- To ensure that the proper service / support is being provided to the client

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- I have found that having a strong team structure can provide for better client relationships

COMPANY B – TEAM 1 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	2	Quality	2
Quantity	2	Cost Control	0
Customer Satisfaction	4	Speed	2

List other performance measures used by your team:

Manager:
- n/a

Members:
- Financial effectiveness

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 2 NO 2

If yes, what are they?

Manager:
- n/a

Members:
- No response

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF

n/a

COMPANY B – TEAM 2 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	4
NUMBER OF SURVEYS:	13
AVERAGE MONTHS ON TEAM:	30.1

EDUCATION LEVEL:

High School	1
Some College	6
Bachelor's Degree	3
Advanced Degree	1
Other	1

SUPPORT SYSTEM DEFFICIENCY:

Rewards	0.49
Communications	0.19
Design/Measurement	0.47
Training	0.22

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.00	3.83
Managers	4.50	4.60

MEETING FREQUENCY:

Daily	0
1 time per week	2
2 or more times per week	1
1 or 2 times per month	10

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- Software support and service reporting

Members:
- To use our skills and knowledge to perform tasks in order to satisfy our customers (internally and externally)
- To perform good quality work, meet deadlines high availability
- To provide scheduling support on multiple platforms
- Provide top priority service delivery with in production
- Support and administer application software
- Provide high availability automated batch scheduling services on UNI and INT platforms
- Batch jobs scheduling, learning new applications
- Our purpose is to provide customer service to our clients. Ensure that the task is given or questions asked are answered efficiently, within the allotted time and to ensure the quality of our work
- Customer satisfaction

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- It must not be selfish, eager to help each other.
- Team work is the foundation for success - individuals - will not play a very important role with I-HP

COMPANY B – TEAM 2 SNAPSHOT
PART 2

OPERATIONAL MEASURES:	FINANCIAL MEASURES:
Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.	Do any of your team's performance measures involve financial metrics?
Cycle Time 9 Quality 11M Quantity 8 Cost Control 9 Customer Satisfaction 12M Speed 8M	YES 4 NO 4 M
List other performance measures used by your team:	If yes, what are they?
Manager: º Improvements º Leadership	Manager: º No comment
Members: º Problem resolving; teamwork; incident management º Service outages for production for 0 outages º How we work well with others. How we try to improve ourselves. º Company values	Members: º Always be cost effective (financially effective). Always be looking for ways to reduce waste and reduce cost.

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF

n/a

COMPANY B – TEAM 3 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Parallel Team
STAGE:	Potential Team (3)
NUMBER OF SURVEYS:	5
AVERAGE MONTHS ON TEAM:	16.4

EDUCATION LEVEL:

High School	0
Some College	3
Bachelor's Degree	2
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	0
Communications	(0.13)
Design/Measurement	(0.20)
Training	0

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	3.73	3.92
Managers	2.88	3.60

MEETING FREQUENCY:

Daily	0
1 time per week	5
2 or more times per week	0
1 or 2 times per month	0

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- To continuously improve the quality of … documentation

Members:
- To enhance the quality of information-sharing and documentation document business processes.
- To provide technical documentation to the organization.
- To improve the quality of documentation at …
- To promote effective, available and complete knowledge management to the organization
- To establish corporate standards for documentation and innovative methods for document management and dissemination

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- Our team members have functional accountabilities that prevent total commitment to team efforts. (My own commitment is only 5% of my available time!) This dichotomy is the most significant weakness of our team.

COMPANY B – TEAM 3 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	2	Quality	5M
Quantity	1	Cost Control	1
Customer Satisfaction	4M	Speed	0M

List other performance measures used by your team:

Manager:
- Process improvement

Members:
- Use of products

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 1M NO 4

If yes, what are they?

Manager:
- Cost savings through process improvements

Members:
- Cost/benefit

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF
n/a

COMPANY B – TEAM 4 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	High Perf (5)
NUMBER OF SURVEYS:	3
AVERAGE MONTHS ON TEAM:	28.3

EDUCATION LEVEL:

High School	0
Some College	1
Bachelor's Degree	2
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.27)
Communications	(0.33)
Design/Measurement	(0.14)
Training	(0.11)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.21	3.93
Managers	-	-

MEETING FREQUENCY:

Daily	0
1 time per week	0
2 or more times per week	1
1 or 2 times per month	2

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- n/a

Members:
- To deliver the task/service on time in a very professional way with perfection so that customer is happy to see the results
- To be able to provide quality service at an expected time
- To provide the best possible support for our client and to try and improve any process where possible

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- No response

COMPANY B – TEAM 4 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.			
Cycle Time	1	Quality	3
Quantity	0	Cost Control	0
Customer Satisfaction	3	Speed	1
List other performance measures used by your team:			
Manager: º n/a			
Members: º no responses			

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?
YES 2 NO 0
If yes, what are they?
Manager: º n/a
Members: º Cutting the cost of overtime º Increased revenue º Cost savings º Cutting the cost of overtime

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF

COMPANY B – TEAM 5 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Real Team (4)
NUMBER OF SURVEYS:	8
AVERAGE MONTHS ON TEAM:	19.3

EDUCATION LEVEL:

High School	0
Some College	4
Bachelor's Degree	3
Advanced Degree	0
Other	1

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.89)
Communications	(0.21)
Design/Measurement	(0.60)
Training	0

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.25	3.95
Managers	4.29	3.75

MEETING FREQUENCY:

Daily	0
1 time per week	8
2 or more times per week	0
1 or 2 times per month	0

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- To deliver I-HP mq support services to various customers

Members:
- Provide a focal point in … for all mq series activities. e.g. setting standards, consulting, support
- Support mq series environment on distributed platforms across a varied customer base
- MQ team works towards the focal point for mq with organization
- To provide high quality of service availability to … clients with little to no outage on the mq platform
- To set the technical and strategic direction of the use of mq series software within …
- To set standards and provide guidelines to other teams within our organization
- To provide high quality of service to mq users
- To provide tactical and strategic mq series support and direction to I-HP and CIBC

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- This is an excellent team. There is information sharing and strong work ethic. It is a team you can feel comfortable learning and developing in.
- Our team has been successful because we are a collection of analysts from various teams, but are able to work very effectively together.

COMPANY B – TEAM 5 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.			
Cycle Time	2	Quality	7M
Quantity	4	Cost Control	5
Customer Satisfaction	8M	Speed	6
List other performance measures used by your team:			
Manager: º n/a			
Members: º Profit; participation; commitment; knowledge			

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?
YES 7 NO 1M
If yes, what are they?
Manager: º n/a
Members: º Revenue; under budget, cost of team; revenue inflow º Cost compared to other services (like services) º Revenue for mq clients; cost control; increased revenue º Unit cost to install and on-going cost to support mq series o all platforms

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF n/a

COMPANY B – TEAM 6 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Parallel team
STAGE:	Potential team (3)
NUMBER OF SURVEYS:	10
AVERAGE MONTHS ON TEAM:	11.3

EDUCATION LEVEL:

High School	2
Some College	3
Bachelor's Degree	4
Advanced Degree	0
Other	1

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.66)
Communications	(0.22)
Design/Measurement	(0.32)
Training	0

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	3.49	3.30
Managers	3.75	3.20

MEETING FREQUENCY:

Daily	0
1 time per week	0
2 or more times per week	0
1 or 2 times per month	10

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- To act as enterprise stewards for the company to ensure that problem and change management disciplines are adhered to in the simplest way for the organization via best practices

Members:
- Ensure problem and change is followed in the processes of …(omitted company name)
- To enhance stewardship of problem and change processes throughout the company
- To improve the problem and change management process in the organization
- To satisfy customers enterprise will in regards to the problem and change processes
- The mission statement is on target
- Improve change and ?? process and tools within I-HP
- Refine and improve change and problem processes
- The purpose is to ensure an effective problem and change management environment
- Represent each organization in the maintenance, reshaping/restoring, and communication of using the problem/change tool and procedures

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- Our team works well together, regardless of the company recognition
- Goals need to be realistic and attainable. Long term goals should be bettered gradually
- From what I've encountered so far, this team works very well together and will accomplish what it sets out to do
- I would question the quantity of work produced and its relative value to the organization. I am personally frustrated due to our lack of speed at making the necessary changes to move the organization forward. I don't believe that we are making a difference! Also, when we cross-functional boundaries, the turf protection starts and creative ideas are rejected
- New team members require education on high performing teams
- As I am fairly new to the team, I am still getting used to everyone

COMPANY B – TEAM 6 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	1	Quality	9M
Quantity	2	Cost Control	1
Customer Satisfaction	5M	Speed	0

List other performance measures used by your team:

Manager:

- Improvement in change management. Improvements in problem management. Development of best practices. Development of local stewards (dissemination of ownership and responsibility)

Members:

- Statistics

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 0 NO 8M

If yes, what are they?

Manager:

- Maybe in 'time' if quality measures are implemented

Members:

- No response

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF n/a

COMPANY B – TEAM 7 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Parallel Team
STAGE:	Real team (4)
NUMBER OF SURVEYS:	4
AVERAGE MONTHS ON TEAM:	5

EDUCATION LEVEL:

High School	0
Some College	0
Bachelor's Degree	2
Advanced Degree	0
Other	2

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.40)
Communications	(0.33)
Design/Measurement	(0.86)
Training	0

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	3.94	3.60
Managers	4.00	4.00

MEETING FREQUENCY:

Daily	0
1 time per week	0
2 or more times per week	0
1 or 2 times per month	4

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- Implement customer satisfaction strategy and raise the skills, competencies of … employees, relative to customer satisfaction

Members:
- Promote awareness of/about customer satisfaction within our company. Educate employees about ways to improve our customer's satisfaction
- To improve the customer satisfaction awareness in the company

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- No response

COMPANY B – TEAM 7 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.			
Cycle Time	0	Quality	4
Quantity	0	Cost Control	0
Customer Satisfaction	4M	Speed	0
List other performance measures used by your team:			
Manager: º No response			
Members: º No response			

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?
YES 2 NO 2M
If yes, what are they?
Manager: º No response
Members: º Indirectly, increased revenue

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF n/a

COMPANY B – TEAM 8 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Parallel Team
STAGE:	Real Team (4)
NUMBER OF SURVEYS:	6
AVERAGE MONTHS ON TEAM:	7.3

EDUCATION LEVEL:

High School	0
Some College	2
Bachelor's Degree	3
Advanced Degree	1
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.38)
Communications	0
Design/Measurement	(0.20)
Training	(0.22)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	3.81	3.60
Managers	5.00	4.20

MEETING FREQUENCY:

Daily	0
1 time per week	1
2 or more times per week	0
1 or 2 times per month	5

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- New team so not completed charter but generally - "To increase awareness and respect for diversity in the organization"

Members:
- We gathered together as a team to pursue the diversity issues within an organization to address to the employees that what is diversity and how it effects our work environment
- Interesting and rewarding. Brings issues to the surface
- To promote diversity awareness and benefits throughout the organization
- To spread awareness about diversity to our organization
- Encourage diversity and understanding in the workplace

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- We have a really great team! Team members are educated and we discuss everything openly. The diversity team is one of the best teams ever I have been a member of
- Diversity team is effective. Also, it improves the company as an infrastructure resulting in improved sales and service for our clients

COMPANY B – TEAM 8 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.			
Cycle Time	3	Quality	4M
Quantity	1	Cost Control	3
Customer Satisfaction	4M	Speed	1
List other performance measures used by your team:			
Manager: º Corporate culture of tolerance/respect/diversity. Employee satisfaction/enjoyment in work environment			
Members: º Interaction. Feedback. Moral understanding. º Awareness (monthly) º Co-worker tolerance			

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?
YES 1 NO 5M
If yes, what are they?
Manager: º n/a
Members: º (budget only)

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF

APPENDIX J

COMPANY 'C' SUMMARY
Sorted by Team Number

		Operational Measures[1]						Financial Measures[2]		Perceptual Measures			Support Systems
Team Number	Stage	Cycle Time	Quality	Quantity	Cost Control	Customer Satisfaction	Speed	Financial Measures	TEF	Team Potency	Perf (Team)	Perf (Mgr)	Average Gap
1	2	100%	0% M	0% M	0%	33%	0% M	0% M	n/a	2.71	2.23	3.20	(1.45)
2	3	50% M	25% M	0% M	63% M	75% M	63% M	63%M	n/a	3.38	2.53	4.00	(1.35)
3	2	38% M	75% M	25%	75% M	63% M	75% M	100% M	n/a	3.88	3.85	4.00	(0.78)
4	2	33%	100% M	0%	100%	67% M	100%	67%	n/a	4.17	3.07	4.40	(0.27)
5	2	20%	100% M	0%	0%	80% M	60% M	0% M	n/a	3.70	3.20	4.20	(1.25)
6	4	50% M	100% M	33% M	83% M	83% M	50% M	100% M	n/a	4.06	3.60	3.20	(0.35)
7	5	33% M	100%M	0%	100% M	33% M	33%M	100%M	n/a	3.96	3.80	4.40	(0.53)
All Teams		36%	72%	11%	61%	67%	58%	67%		3.69	3.18	3.91	(0.85)
Percent Managers		57%	100%	43%	57%	86%	85%	85%					

[1]Operational Measures present the percent of team members selecting a specific measure.

[2]Financial Measure presents the percent of team members that say they have financial measures.

TEF is the calculated factor for the team.

[3]Support Systems presents the average of the four gap measures (TRNGgap + REWgap + COMgap + DMgap)/4

[4]'M' designates measures the team manager selected.

COMPANY 'C' SUMMARY
Sorted by Team Potency

		Operational Measures[1]						Financial Measures[2]		Perceptual Measures			Support Systems
Team Number	Stage	Cycle Time	Quality	Quantity	Cost Control	Customer Satisfaction	Speed	Financial Measures	TEF	Team Potency	Perf (Team)	Perf (Mgr)	Average Gap
4	2	33%	100%	0%	100%	67%	100%	67%	n/a	4.17	3.07	4.40	(0.27)
6	4	50%	100%	33%	83%	83%	50%	100%	n/a	4.06	3.60	3.20	(0.35)
7	5	33%	100%	0%	100%	33%	33%	100%	n/a	3.96	3.80	4.40	(0.53)
3	2	38%	75%	25%	75%	63%	75%	100%	n/a	3.88	3.85	4.00	(0.78)
5	2	20%	100%	0%	0%	80%	60%	0%	n/a	3.70	3.20	4.20	(1.25)
2	3	50%	25%	0%	63%	75%	63%	63%	n/a	3.38	2.53	4.00	(1.35)
1	2	100%	0%	0%	0%	33%	0%	0%	n/a	2.71	2.23	3.20	(1.45)
All Teams		36%	72%	11%	61%	67%	58%	67%					

[1]Operational Measures present the percent of team members selecting a specific measure.

[2]Financial Measure presents the percent of team members that say they have financial measures.

TEF is the calculated factor for the team -- not calculated for this company.

[3]Support Systems presents the average of the four gap measures (TRNGgap + REWgap + COMgap + DMgap)/4

COMPANY C – TEAM 1 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Project Team
STAGE:	Pseudo Team (2)
NUMBER OF SURVEYS:	3
AVERAGE MONTHS ON TEAM:	16.0

EDUCATION LEVEL:

High School	0
Some College	1
Bachelor's Degree	0
Advanced Degree	2
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(2.06)
Communications	(1.06)
Design/Measurement	(1.57)
Training	(1.11)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	2.71	2.23
Managers	3.75	3.20

MEETING FREQUENCY:

Daily	0
1 time per week	0
2 or more times per week	0
1 or 2 times per month	3

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- Review of product and process quality data to proactively drive improvement

Members:
- Review quality indicators throughout the organization and determine if corrective actions are warranted
- Review, evaluate, and establish action assignments to address company-wide problems
- Implement corrective action based on data and company need

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- No comments

COMPANY C – TEAM 1 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.			
Cycle Time	0	Quality	1M
Quantity	0	Cost Control	0M
Customer Satisfaction	1	Speed	0M
List other performance measures used by your team:			
Manager: º Effectiveness			
Members: º Reliability			

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?
YES 0M NO 3
If yes, what are they?
Manager: º Cost reduction/ cost of quality
Members: º No comments

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF n/a

COMPANY C – TEAM 2 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Project Team
STAGE:	Potential Team (3)
NUMBER OF SURVEYS:	8
AVERAGE MONTHS ON TEAM:	16.4

EDUCATION LEVEL:

High School	0
Some College	0
Bachelor's Degree	4
Advanced Degree	4
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(1.57)
Communications	(1.08)
Design/Measurement	(1.55)
Training	(1.21)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	3.38	2.53
Managers	4.75	4.00

MEETING FREQUENCY:

Daily	0
1 time per week	8
2 or more times per week	0
1 or 2 times per month	0

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- Develop the sterrad 200 sterilizer and disposable cassette for USA and international markets

Members:
- Design a saleable product within the customer requirements (internal and external)
- Develop a medical device for world market and bring it to commercial release
- Develop a robust healthcare sterilizer in the shortest amount of time
- To develop and successfully launch high quality sterilizer per market requirement within deadline
- Act as a resource 'pool' for an understaffed engineering department
- Develop sterrad 200 emp sterilizer
- Develop a sterilizer that meets market requirements
- Oversee the development tasks for the sterrad 200 healthcare sterilizer until the market requirements are met.

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- Unclear how team performance is reflected in individual's performance rating
- No team rewards - rewards based on individual efforts within one's department - teams have similar membership, therefore the individuals are stretched very thin. Top managers set goals - don't listen to reality or team input. Team are a way to 'steal" resources to complete department or individual goals!
- Effective teams need clear and specific directions which do not conflict or con company goals. Team members must be accountable to the team leader

COMPANY C – TEAM 2 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.			
Cycle Time	4M	Quality	2M
Quantity	0M	Cost Control	5M
Customer Satisfaction	6M	Speed	5M
List other performance measures used by your team:			
Manager: º Service calls/year. Standard cost			
Members: º Meet deadline; meet the schedule			

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?
YES 5M NO 3
If yes, what are they?
Manager: º Standard cost. Service calls/year (@ ~ 1000/visit)
Members: º ROI. NPV

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF n/a

COMPANY C – TEAM 3 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Project Team
STAGE:	Pseudo Team (2)
NUMBER OF SURVEYS:	8
AVERAGE MONTHS ON TEAM:	4.6

EDUCATION LEVEL:

High School	0
Some College	0
Bachelor's Degree	4
Advanced Degree	4
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(1.32)
Communications	(0.60)
Design/Measurement	(0.77)
Training	(0.42)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	3.88	3.85
Managers	4.25	4.00

MEETING FREQUENCY:

Daily	0
1 time per week	4
2 or more times per week	0
1 or 2 times per month	4

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- To develop a concentrated form of CIDEX OPA solution for automatic endoscope repressor

Members:
- To bring to market in a rapid frame a specific product, i.e. OPAC
- To develop a formulation for OPA concentrate, market it, and succeed in scaling up to large scale production
- Get a new product developed an get it done in a tough timeline
- To develop a new product and bring it to market and to achieve on-time, under budget
- To expand new product line
- Uncertain, because the upper management has changed our mission as time goes
- To develop a new product in response to market requirements
- To produce and launch a new product world-wide - OPAC

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- There is no team-working outcome, so everybody is doing this part and then information will be shared afterwards
- … has highly competent and committed people participating on teams. However: there is a lack of training, performance metrics and rewards. An employee's performance, more often than not, excludes team contributions but rather focuses on that person's day to day job responsibilities
- My team is ok so far; however, my team needs to motivate on each individual job commitment and time
- To be successful as a team, we recognize each other's strengths and respect each other's abilities
- This is a newly formed cross functional team that has come together and has worked very well together

COMPANY C – TEAM 3 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	3M	Quality	6M
Quantity	2	Cost Control	6M
Customer Satisfaction	5M	Speed	6M

List other performance measures used by your team:

Manager:

- Deliverables. Approved by regulatory agency

Members:

- Product performance. Stability of product. Formulation. Criteria set by different countries. Manufacturing site that can do the job. Deadlines; achieving goals. Meeting a product timeline.

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 8M NO 0

If yes, what are they?

Manager:

- Break even time. Return map

Members:

- Project cost. Product cost. Profit margin. ROI. Producing product for less than $50 bottle. If we make enough overall to make project feasible.
- Product cost; target cost; increased revenue; cost of the product
- Within cost budget or expenses

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF

COMPANY C – TEAM 4 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Project Team
STAGE:	Pseudo Team (2)
NUMBER OF SURVEYS:	3
AVERAGE MONTHS ON TEAM:	18.67

EDUCATION LEVEL:

High School	0
Some College	1
Bachelor's Degree	1
Advanced Degree	1
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.33)
Communications	(0.39)
Design/Measurement	(0.34)
Training	0

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.17	3.07
Managers	4.13	4.40

MEETING FREQUENCY:

Daily	0
1 time per week	1
2 or more times per week	2
1 or 2 times per month	0

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- Develop a new product and carry through to production

Members:
- Develop and release to market industrial sterilizers
- To produce a working product for the customer that is cost effective, reliable, user friendly, and useful
- To develop and launch the sterrad 800 sterilizer and to support ? customer needs in the early stages of the project

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- If the team leader is a type A personality and the rest of the team is not, there are major problems. The leader cannot be a control freak that destroys empowerment and tells you how to do your job.
- The team concept is great in a company when all the members work together
- A leader helps out by not only dictating items that need to be accomplished, but listening to concerns and ideas openly

COMPANY C – TEAM 4 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	1	Quality	3M
Quantity	0	Cost Control	3
Customer Satisfaction	2M	Speed	3

List other performance measures used by your team:

Manager:
- Completing goal on time

Members:
- Deadlines met; Reliability

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 2 NO 1M

If yes, what are they?

Manager:
- no comment

Members:
- Standard cost. CAR
- This is a new product so any cost savings (parts, labor time to build) affects the bottom figure (line) of cost to build equipment
- Standard cost of product. Capital cost of equipment

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF n/a

COMPANY C – TEAM 5 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Project Team
STAGE:	Pseudo Team (2)
NUMBER OF SURVEYS:	5
AVERAGE MONTHS ON TEAM:	1

EDUCATION LEVEL:

High School	0
Some College	0
Bachelor's Degree	4
Advanced Degree	1
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(1.58)
Communications	(0.86)
Design/Measurement	(1.08)
Training	(1.47)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	3.70	3.20
Managers	4.50	4.20

MEETING FREQUENCY:

Daily	1
1 time per week	1
2 or more times per week	3
1 or 2 times per month	0

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- Correct critical problems on the sterrad 100s injector pump

Members:
- Solve "isi" injection system interrupts problem
- Resolve ISI failures
- The purpose of this team is to improve the quality and reliability of our system
- To solve four root causes of ST199s injection system failures and completely implement solution within four weeks
- Reduce incidents of injector problems in the field now

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- Old fighting mentality with new sheep skin
- This team is very focused, composed of highly skilled individuals who work as a team toward completing the project

COMPANY C – TEAM 5 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	1	Quality	5M
Quantity	0	Cost Control	0
Customer Satisfaction	4M	Speed	3M

List other performance measures used by your team:

Manager:

- Reduction of corrective maintenance calls from field

Members:

- Staying late. Work weekend

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 0M NO 5

If yes, what are they?

Manager:

- Cost savings from reduced service calls

Members:

- No comment

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF n/a

COMPANY C – TEAM 6 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Project Team
STAGE:	Real Team (4)
NUMBER OF SURVEYS:	6
AVERAGE MONTHS ON TEAM:	34

EDUCATION LEVEL:

High School	0
Some College	0
Bachelor's Degree	4
Advanced Degree	2
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.66)
Communications	(0.39)
Design/Measurement	0
Training	(0.34)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.06	3.60
Managers	4.38	3.20

MEETING FREQUENCY:

Daily	0
1 time per week	6
2 or more times per week	0
1 or 2 times per month	0

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- Development of biological indicator products (5)

Members:
- Ensure proper development/functioning of biological indicators
- To develop innovative, high quality, cost effective biological indicator products
- Develop biological indicator based products for the Sterrad line of sterilizers
- Develop BI products
- Develop new biological products

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- No comments

COMPANY C – TEAM 6 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	3M	Quality	6M
Quantity	2M	Cost Control	5M
Customer Satisfaction	5M	Speed	3M

List other performance measures used by your team:

- Manager:
- No comment

Members:

- Product development; inventive innovation - patent application. 510k approval (FDA) done by deadline. Profit margin on new products

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 6M NO 0

If yes, what are they?

Manager:

- ROI. Standard cost attainment

Members:

- Profit margin; cost savings; ROY
- New product development; lower cost products

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF 0.0

COMPANY C – TEAM 7 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Project Team
STAGE:	High Perf Team (5)
NUMBER OF SURVEYS:	3
AVERAGE MONTHS ON TEAM:	9.0

EDUCATION LEVEL:

High School	0
Some College	0
Bachelor's Degree	2
Advanced Degree	1
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(1.07)
Communications	(0.33)
Design/Measurement	(0.71)
Training	0

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	3.96	3.80
Managers	4.75	4.40

MEETING FREQUENCY:

Daily	0
1 time per week	3
2 or more times per week	0
1 or 2 times per month	0

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- To redesign the cassette sleeve of ST 50/300 for cost reduction

Members:
- Produce a high quality product to replace the existing problems and product by the agreed upon timeline and w/in budget
- Redesign the packaging of a product to reduce cost

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- These comments are true for this particular team. My experience with the other six teams I've been on was vastly different

COMPANY C – TEAM 7 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	1M	Quality	3M
Quantity	0	Cost Control	3M
Customer Satisfaction	1M	Speed	1M

List other performance measures used by your team:

Manager:

- Quality. Customer satisfaction. Cost control. Project length (duration)

Members:

- Product cost. Manufacturability

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 3M NO 0

If yes, what are they?

Manager:

- Raw material cost. Simplified manufacturing operation. Labor cost. Feasibility for automation

Members:

- Target standard cost; cost savings
- We targeted purchase price and internal labor content. Purchase price reduction is measured

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF

APPENDIX K

COMPANY 'D' SUMMARY
Sorted by Team Number

		Operational Measures[1,4]						Financial Measures[2]		Perceptual Measures			Support Systems
Team Number	Stage	Cycle Time	Quality	Quantity	Cost Control	Customer Satisfaction	Speed	Financial Measures	TEF	Team Potency	Perf (Team)	Perf (Mgr)	Average Gap
1	5	100% M	100% M	100% M	100% M	100% M	100% M	100% M	20.0	4.66	3.85	5.00	(0.56)
2	5	50% M	100% M	100% M	75% M	100% M	75% M	100% M	-	4.59	4.30	5.00	(1.06)
3	4	86%	100% M	100% M	100%M	100% M	86% M	100% M	-	4.18	3.91	4.20	(0.97)
4	5	75%	100% M	100% M	75% M	75% M	75% M	75%	-	4.58	4.28	3.40	(0.29)
5	4	33%	100%	100%	33%	33%	67%	75%	20.0	4.48	3.87	4.00	(0.94)
6	4	0%	100% M	100% M	0% M	25% M	75%	75% M	-	4.31	4.15	3.00	(0.89)
7	3	0%	80% M	40%	20%	60% M	100% M	40%	-	3.90	3.72	2.25	(0.72)
8	3	33%	100% M	100% M	100% M	67%	67% M	33%	-	4.08	3.47	2.80	(0.45)
9	4	50%	50%	100%	50%	50%	50%	100%	-	3.94	3.80	-	(0.20)
10	3	75% M	100% M	75% M	75% M	50%	75% M	100% M	-	3.91	3.50	3.00	(0.51)
All Teams		49%	94%	92%	59%	61%	80%	62%		4.26	3.89	3.63	(0.66)
Percent Managers		30%	80%	80%	70%	69%	70%	50%					

[1]Operational Measures present the percent of team members selecting a specific measure.

[2]Financial Measure presents the percent of team members that say they have financial measures.

TEF is the calculated factor for the team.

[3]Support Systems presents the average of the four gap measures (TRNGgap + REWgap + COMgap + DMgap)/4

[4']M' designates measures the team manager selected.

COMPANY 'D' SUMMARY
Sorted by Team Potency

		Operational Measures[1]						Financial Measures[2]		Perceptual Measures			Support Systems
Team Number	Stage	Cycle Time	Quality	Quantity	Cost Control	Customer Satisfaction	Speed	Financial Measures	TEF	Team Potency	Perf (Team)	Perf (Mgr)	Average Gap
1	5	100%	100%	100%	100%	100%	100%	100%	20.0	4.66	3.85	5.00	(0.56)
2	5	50%	100%	100%	75%	100%	75%	100%	-	4.59	4.30	5.00	(1.06)
4	5	75%	100%	100%	75%	75%	75%	75%	-	4.58	4.28	3.40	(0.29)
5	4	33%	100%	100%	33%	33%	67%	75%	20.0	4.48	3.87	4.00	(0.94)
6	4	0%	100%	100%	0%	25%	75%	75%	-	4.31	4.15	3.00	(0.89)
3	4	86%	100%	100%	100%	100%	86%	100%	-	4.18	3.91	4.20	(0.97)
8	3	33%	100%	100%	100%	67%	67%	33%	-	4.08	3.47	2.80	(0.45)
9	4	50%	50%	100%	50%	50%	50%	100%	-	3.94	3.80	-	(0.20)
10	3	75%	100%	75%	75%	50%	75%	100%	-	3.91	3.50	3.00	(0.51)
7	3	0%	80%	40%	20%	60%	100%	40%	-	3.90	3.72	2.25	(0.72)
All Teams		49%	94%	92%	59%	61%	80%	62%		4.26	3.89	3.63	(0.66)

[1]Operational Measures present the percent of team members selecting a specific measure.

[2]Financial Measure presents the percent of team members that say they have financial measures.

TEF is the calculated factor for the team.

[3]Support Systems presents the average of the four gap measures (TRNGgap + REWgap + COMgap + DMgap)/4

COMPANY D – TEAM 1 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	High Perf Team (5)
NUMBER OF SURVEYS:	4
AVERAGE MONTHS ON TEAM:	49.8

EDUCATION LEVEL:

High School	1
Some College	2
Bachelor's Degree	0
Advanced Degree	0
Other	1

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.85)
Communications	(0.33)
Design/Measurement	(1.07)
Training	0

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.66	3.85
Managers	5.00	5.00

MEETING FREQUENCY:

Daily	4
1 time per week	0
2 or more times per week	0
1 or 2 times per month	0

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- Manufacture liquid dish detergent finished goods from blowing and labeling the container, to boxing, palleting and shipping finished product

Members:
- To produce the most quality cases possible and have fun doing it
- To produce a quality product at the least amount of expense to the company while maintaining a balance between work and family
- To do the best possible job we can
- Make a quality product as quickly and efficiently as possible

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- Makes for a good and productive work environment

COMPANY D – TEAM 1 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	4M	Quality	4M
Quantity	4M	Cost Control	4M
Customer Satisfaction	4M	Speed	4M

List other performance measures used by your team:

Manager:

- Safety. Team development (high performance work system)

Members:

- Asset utilization. Operating efficiencies. Cost per case. How well you leave the next shift. Asset utilization and opp. efficiency. Job satisfaction; safety

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 4M NO 0

If yes, what are they?

Manager:

- Cost savings (cost avoidance). Asset utilization - Increased capacity

Members:

- Asset utilization. Operating efficiencies. Cost per case. Asset utilization
- Cost savings. Operating efficiency. Asset utilization

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF 20.0

COMPANY D – TEAM 2 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	High Perf Team (5)
NUMBER OF SURVEYS:	4
AVERAGE MONTHS ON TEAM:	28.5

EDUCATION LEVEL:

High School	2
Some College	2
Bachelor's Degree	0
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.65)
Communications	(1.30)
Design/Measurement	(1.21)
Training	(1.08)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.59	4.30
Managers	5.00	5.00

MEETING FREQUENCY:

Daily	3
1 time per week	0
2 or more times per week	1
1 or 2 times per month	0

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- Manufacture liquid dish detergent finished goods from blowing and labeling the container, to boxing, palleting and shipping finished product

Members:
- To produce the highest quality product and to achieve our AU goals
- To consistently run the best numbers we can!
- To produce quality product at a profit - to be the best

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- Communication and self discipline is the key to any productive team

COMPANY D – TEAM 2 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	2M	Quality	4M
Quantity	4M	Cost Control	3M
Customer Satisfaction	4M	Speed	3M

List other performance measures used by your team:

Manager:

- Safety. Team development (high performance work system)

Members:

- No responses

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 3M NO 0

If yes, what are they?

Manager:

- Cost savings (cost avoidance). Asset utilization - increased capacity

Members:

- Cost savings. Changeover production
- Cost per case
- Asset utilization

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF n/a

COMPANY D – TEAM 3 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Real Team (4)
NUMBER OF SURVEYS:	7
AVERAGE MONTHS ON TEAM:	29.6

EDUCATION LEVEL:

High School	2
Some College	3
Bachelor's Degree	1
Advanced Degree	0
Other	1

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(1.74)
Communications	(0.81)
Design/Measurement	(0.73)
Training	(0.61)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.18	3.91
Managers	4.75	4.20

MEETING FREQUENCY:

Daily	0
1 time per week	2
2 or more times per week	0
1 or 2 times per month	5

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- To meet or exceed customer expectations in quality, service, and cost

Members:
- Produce high quality products at low cost to satisfy customer demand
- To produce a quality product at cost or below
- Produce good products - so I can retire at Colgate
- Keep our production high and do line changeovers fast
- To produce as much high-quality products as we safely can
- To produce high quality product with high AU

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- If you can't buy into it, don't waste your time and others

COMPANY D – TEAM 3 SNAPSHOT
PART 2

OPERATIONAL MEASURES:	FINANCIAL MEASURES:
Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.	Do any of your team's performance measures involve financial metrics?
Cycle Time 6 Quality 7M Quantity 7M Cost Control 7M Customer Satisfaction 6M Speed 6M	YES 7 M NO 0
List other performance measures used by your team:	If yes, what are they?
Manager: º Changeover time º Training hours	Manager: º No response
Members: º Asset utilization º Safety º Housekeeping º To produce the amount of cases we are scheduled to change over time º Safety	Members: º Change overs; cost per case º Cost savings º Improved case costs º Asset utilization º Material losses º Increased production º Cost per case º Material losses

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF

n/a

COMPANY D – TEAM 4 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	High Perf Team(5)
NUMBER OF SURVEYS:	5
AVERAGE MONTHS ON TEAM:	24.2

EDUCATION LEVEL:

High School	2
Some College	1
Bachelor's Degree	2
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.36)
Communications	0
Design/Measurement	(0.66)
Training	(0.13)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.58	4.28
Managers	4.25	3.40

MEETING FREQUENCY:

Daily	0
1 time per week	0
2 or more times per week	1
1 or 2 times per month	4

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- To produce quality products at lowest cost meeting product schedules and cost

Members:
- To produce high quality products
- To produce high quality numbers
- To produce as must high-quality product we can
- To give 100% quality, quantity and time
- To make as much soap a possible with quality and safety in mind

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- Mutual respect for one another
- Working as a team always proves positive not only here but in all aspects of life

COMPANY D – TEAM 4 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.			
Cycle Time	4	Quality	5M
Quantity	5M	Cost Control	4M
Customer Satisfaction	4M	Speed	4M
List other performance measures used by your team:			
Manager: º Asset utilization; operating efficiency			
Members: º Housekeeping; asset utilization, safety, attendance º Housekeeping			

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?
YES 4 M NO 0
If yes, what are they?
Manager: º Supplier cases º Overtime scheduling
Members: º Asset Utilization º Cost per case º Cost per case. ocvrtime - coverage by part timers or line-down op techs

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF

n/a

COMPANY D – TEAM 5 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	High Perf Team (5)
NUMBER OF SURVEYS:	6
AVERAGE MONTHS ON TEAM:	10.3

EDUCATION LEVEL:

High School	0
Some College	4
Bachelor's Degree	1
Advanced Degree	0
Other	1

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(1.27)
Communications	(0.41)
Design/Measurement	(0.52)
Training	(1.55)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.48	3.87
Managers	4.50	4.00

MEETING FREQUENCY:

Daily	1
1 time per week	0
2 or more times per week	3
1 or 2 times per month	2

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- To provide a high quality product to our customer at a low cost without hurting our environment or at sacrificing our safety

Members:
- To produce high quality
- To run the best production numbers and quality product
- Make more cases of soap than the other teams
- Produce high quality products quickly
- Run good numbers
- To produce a high quality product at a low cost

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- As a team we work together to solve issues and work towards being the best on our line.

COMPANY D – TEAM 5 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	2	Quality	6
Quantity	6	Cost Control	2
Customer Satisfaction	2	Speed	4

List other performance measures used by your team:

Manager:

- Manual downtime tracking. OSHA rate. LTI rate. Asset utilization.

Members:

- Attendance. Job performance. Safety. Asset utilization. Attendance

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 1 NO 4

If yes, what are they?

Manager:

- Cost savings projects. Team members help prepare manual budget

Members:

- No response

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF Project 1 = $107,166/1000
Project 2 = $292,467/18,600
Total: $399,633/18,600 = 20.4

COMPANY D – TEAM 6 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Real Team (4)
NUMBER OF SURVEYS:	4
AVERAGE MONTHS ON TEAM:	42.5

EDUCATION LEVEL:

High School	1
Some College	1
Bachelor's Degree	1
Advanced Degree	0
Other	1

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(1.55)
Communications	(0.71)
Design/Measurement	(0.79)
Training	(0.50)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.31	4.15
Managers	3.62	3.00

MEETING FREQUENCY:

Daily	3
1 time per week	1
2 or more times per week	0
1 or 2 times per month	0

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- n/a

Members:
- To put out as many cases as possible

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- The team works well together but doesn't have any real goals except to try to get the most cases out the door as easily as possible

COMPANY D – TEAM 6 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	0	Quality	4
Quantity	4	Cost Control	0
Customer Satisfaction	1	Speed	3

List other performance measures used by your team:

Manager:
- n/a

Members:
- No comment

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 3 NO 1

If yes, what are they?

Manager:
- n/a

Members:
- No comment

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF n/a

COMPANY D – TEAM 7 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Potential Team (3)
NUMBER OF SURVEYS:	5
AVERAGE MONTHS ON TEAM:	33.6

EDUCATION LEVEL:

High School	0
Some College	4
Bachelor's Degree	0
Advanced Degree	0
Other	1

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.72)
Communications	(0.31)
Design/Measurement	(0.72)
Training	(1.13)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	3.90	3.72
Managers	3.00	2.25

MEETING FREQUENCY:

Daily	4
1 time per week	1
2 or more times per week	0
1 or 2 times per month	0

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- To produce quality liquids to support finishing (filling) lines

Members:
- To produce and maintain the highest quality standards while performing tasks highly productive in a safe environment
- To supply the finishing lines with quality product and service that enables them and send product to the destinations
- To produce large quantities of high quality liquid surfactants
- To put good quality soap to the finishing lines

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- Our team is solid, loyal and honest. Most of all caring about each other and feelings

COMPANY D – TEAM 7 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	0	Quality	4M
Quantity	2	Cost Control	1
Customer Satisfaction	3M	Speed	5M

List other performance measures used by your team:

Manager:
- No comment

Members:
- Pounds per shift; tank inventory, attendance; daily tasks

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 2 NO 3M

If yes, what are they?

Manager:
- No comment

Members:
- Blend back ratios
- Cost savings. Material losses.
- How to cut cost on perfumes and raw materials

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF n/a

COMPANY D – TEAM 8 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Potential Team (3)
NUMBER OF SURVEYS:	3
AVERAGE MONTHS ON TEAM:	84

EDUCATION LEVEL:

High School	0
Some College	2
Bachelor's Degree	1
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.40)
Communications	(0.61)
Design/Measurement	(0.77)
Training	0

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.08	3.47
Managers	3.50	2.80

MEETING FREQUENCY:

Daily	2
1 time per week	1
2 or more times per week	0
1 or 2 times per month	0

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- Provide maintenance support for facility

Members:
- Keep production running
- Fight fires
- To keep production lines up and running
- To minimize down time (maximizing AU) by providing effective and timely troubleshooting and repair of equipment

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- It is the best way for a new tech to learn a lot quickly, about many different things from different people

COMPANY D – TEAM 8 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	1	Quality	3M
Quantity	3M	Cost Control	3M
Customer Satisfaction	2	Speed	2M

List other performance measures used by your team:

Manager:
- No comment

Members:
- Ind. acct
- Amount of downtime

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 1M NO 2

If yes, what are they?

Manager:
- No comment

Members:
- Asset utilization. Cost per case. % efficiency

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF n/a

COMPANY D – TEAM 9 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Real Team (4)
NUMBER OF SURVEYS:	4
AVERAGE MONTHS ON TEAM:	39

EDUCATION LEVEL:

High School	4
Some College	0
Bachelor's Degree	0
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.40)
Communications	(0.09)
Design/Measurement	(0.15)
Training	(0.16)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	3.94	3.80
Managers	-	-

MEETING FREQUENCY:

Daily	0
1 time per week	0
2 or more times per week	0
1 or 2 times per month	4

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- Produce surfactants for CP - cambridge products (CDL's and HDL's)

Members:
- To supply liquid to the finishing building without interruption
- I don't know
- To utilize our skills to perform well and make good quality product

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- No responses

COMPANY D – TEAM 9 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.			
Cycle Time	2	Quality	2
Quantity	4	Cost Control	2
Customer Satisfaction	2	Speed	2
List other performance measures used by your team:			
Manager: º Safety and number of accidents			
Members: º Asset utilization. Material loss			

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?
YES 0 NO 4
If yes, what are they?
Manager: º Selling base to outside customers. Buying base from outside vendors
Members: º Cost savings

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF n/a

COMPANY D – TEAM 10 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Potential Team (3)
NUMBER OF SURVEYS:	4
AVERAGE MONTHS ON TEAM:	35.8

EDUCATION LEVEL:

High School	0
Some College	1
Bachelor's Degree	2
Advanced Degree	0
Other	1

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(1.35)
Communications	0
Design/Measurement	(0.53)
Training	(0.16)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	3.91	3.50
Managers	3.75	3.00

MEETING FREQUENCY:

Daily	1
1 time per week	1
2 or more times per week	0
1 or 2 times per month	2

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- To produce high quality products in a safe and efficient manner

Members:
- Provide quality results
- We work together to produce a quality product
- Do the best you can
- To produce high quality products efficiently through teamwork

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- I agree with the team concept. It makes you work harder for yourself and others
- If you can work as a team, you can accomplish more

COMPANY D – TEAM 10 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	3M	Quality	4M
Quantity	3M	Cost Control	3M
Customer Satisfaction	2	Speed	3M

List other performance measures used by your team:

Manager:

- Statistical process control. Manual downtime tracking (equipment). Safety. Cycle counts (materials)

Members:

- Attendance, downtime, AU, OSHA recordables/LTI, % downtime

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 4 M NO 0

If yes, what are they?

Manager:

- Material loss controls. Fill weight controls

Members:

- Cost per case; lost case

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF n/a

APPENDIX L

COMPANY 'E' SUMMARY

Sorted by Team Number

		Operational Measures[1]						Financial Measures[2]		Perceptual Measures			Support Systems
Team Number	Stage	Cycle Time	Quality	Quantity	Cost Control	Customer Satisfaction	Speed	Financial Measures	TEF	Team Potency	Perf (Team)	Perf (Mgr)	Average Gap
1	3	64% M	82% M	91% M	64% M	45% M	73% M	73% M		3.83	3.44	3.60	(1.16)
2	4	67%	83% M	33%M	83% M	67% M	67% M	100% M		4.27	3.53	3.20	(0.41)
3	2	100% M	0%	67% M	100%	33% M	0%	100% M		1.13	3.33	3.80	(1.35)
4	3	33%	100%	100%	67%	83%	100%	50%		4.02	3.40	3.60	(0.67)
5	4	60%	90% M	90% M	90% M	80%	70% M	100%		3.94	3.64	3.80	(0.67)
All Teams		65%	71%	76%	81%	62%	62%	85%		3.44	3.47	3.60	(0.85)
Percent Managers		40%	60%	80%	60%	60%	60%	60%					

Sorted by Team Potency

		Operational Measures[1]						Financial Measures[2]		Perceptual Measures			Support Systems
Team Number	Stage	Cycle Time	Quality	Quantity	Cost Control	Customer Satisfaction	Speed	Financial Measures	TEF	Team Potency	Perf (Team)	Perf (Mgr)	Average Gap
2	4	67%	83%	33%	83%	67%	67%	100%		4.27	3.53	3.20	(0.41)
4	3	33%	100%	100%	67%	83%	100%	50%		4.02	3.40	3.60	(0.67)
5	4	60%	90%	90%	90%	80%	70%	100%		3.94	3.64	3.80	(0.67)
1	3	64%	82%	91%	64%	45%	73%	73%		3.83	3.44	3.60	(1.16)
3	2	100%	0%	67%	100%	33%	0%	100%		1.13	3.33	3.80	(1.35)
All Teams		65%	71%	76%	81%	62%	62%	85%		3.44	3.47	3.60	(0.85)

[1]Operational Measures present the percent of team members selecting a specific measure.

[2]Financial Measure presents the percent of team members that say they have financial measures.

TEF is the calculated factor for the team -- not calculated for this company.

[3]Support Systems presents the average of the four gap measures (TRNGgap + REWgap + COMgap + DMgap)/4

[4]'M' designates measures the team manager selected.

COMPANY E – TEAM 1 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Potential Team (3)
NUMBER OF SURVEYS:	11
AVERAGE MONTHS ON TEAM:	44.1

EDUCATION LEVEL:

High School	3
Some College	7
Bachelor's Degree	1
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(1.85)
Communications	(0.72)
Design/Measurement	(1.10)
Training	(0.97)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	3.83	3.44
Managers	4.63	3.60

MEETING FREQUENCY:

Daily	7
1 time per week	1
2 or more times per week	1
1 or 2 times per month	2

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- To produce quality product in an efficient manner, and to have fun while doing it

Members:
- Get the job done
- As a puppet, management has cut us out of original goal of this plant
- Production is king, all other things don't count
- Produce high quality product in a safe and productive manner within the guidelines (KPI's)
- To make quality batches of dry ingredients for our pet food
- To produce quality product with the least scrap, while running the highest efficiencies
- To get the product out the door, that's all they care about, that's all that matters to them (the big picture)
- To get the job at hand done, but we don't really work together well
- To come to work, put in 8 hours and go home. Stop rotating shifts 70% greater chance of heart attack
- To produce high quality pet food with little or no downtime

COMPANY E – TEAM 1 SNAPSHOT
PART 1 (Continued)

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- The teams work is fine but the leadership is a hindrance
- The present management does not come close to the skills this plant had when it opened up. They talk the talk-but don't walk the walk
- It is difficult to have an HCWS environment when many "leaders" are traditional and rigid in their team processes
- Teams don't trust upper management. Lied to too many times in the past. We say its team (HCWS) but it's not. People spoiled and lazy and tired of rotating shifts
- Production does not have meetings all the time so some of these statements seldom apply to production
- Its just a form of traditional work environment with a little stab you in the back thrown in the mix
- There is not much, most everyone stays job specific and doesn't go out of their way to help someone. The team basically is in very good shape here at Hills Richmond!!!
- Team work is okay and can even be great if handled correctly but we need to realize as a facility that rotating shifts makes unproductive people, while making them unhappy
- Our team works well together. The company does not recognize individual performance, only the teams performance, which is not always very motivation, because some people work harder than others. We are not given the resources needed to perform our jobs. We have less people, but expectations are the same. The only time an individual is given any recognition is when they make a mistake, then they are held accountable

COMPANY E – TEAM 1 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	7M	Quality	9M
Quantity	10M	Cost Control	7M
Customer Satisfaction	5M	Speed	8M

List other performance measures used by your team:

Manager:

- Process asset utilization. safety. change over time. unscheduled down time. pac utilization. schedule completion. scrap produced

Members:

- Sanitation; safety; pounds run per shift
- Schedule attainment. packaging AU. processing asset utilization (AU). downtime
- Chane over time; asset utilization
- Lost time accidents. cost per pound; PM's

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 8 M NO 3

If yes, what are they?

Manager:

- Yield % good product

Members:

- Cost per lb; scrap throughout rate
- Cost savings (budget). cost per pound (total)

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF n/a

COMPANY E – TEAM 2 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Parallel Team
STAGE:	Real Team (4)
NUMBER OF SURVEYS:	6
AVERAGE MONTHS ON TEAM:	50.0

EDUCATION LEVEL:

High School	1
Some College	5
Bachelor's Degree	0
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(1.27)
Communications	(0.22)
Design/Measurement	(0.54)
Training	(0.39)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.27	3.53
Managers	4.00	3.20

MEETING FREQUENCY:

Daily	1
1 time per week	3
2 or more times per week	0
1 or 2 times per month	2

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- Implement capitol projects. Optimize existing processes. Technical support

Members:
- to execute major maintenance and CEB projects. Support operating teams as needs and subject matter experts operating cells
- Implement project to better help the plants performance
- To manage capitoal and maintenance work reliably and to support one another on a daily basis
- To execute project timely and in a manner that does not interfere with business needs
- Execute capital projects and install equipment and help with maintenance spending
- To implement capital projects through all phases of completion and operationally support production

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- Publicly our facility maintains that we are a team and though management may see it that way its obvious that guidelines that quantify a team are not present throughout the whole plant. Management may work as a team but the fallout of a management team meeting may not represent how technicians really feel
- My comments reflect on my team (project) and not the whole plant
  Sometimes its hard to function as a team because our areas of expertise lie within different departments of the plant

COMPANY E – TEAM 2 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	4	Quality	5M
Quantity	2M	Cost Control	5M
Customer Satisfaction	4M	Speed	4M

List other performance measures used by your team:

Manager:
- no response

Members:
- Deadlines
- Project time. budget. quality of work
- Asset utilization. safety

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 6 M NO 0

If yes, what are they?

Manager:
- Labor reduction. yield improvement. rate improvement. scrap reduction

Members:
- Budget reports; capital dollars; product yield
- Cost analysis of CEB spending. Cost analysis of major maintenance spending cost savings. Budget attainment

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF n/a

COMPANY E – TEAM 3 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Pseudo Team (2)
NUMBER OF SURVEYS:	3
AVERAGE MONTHS ON TEAM:	28.0

EDUCATION LEVEL:

High School	1
Some College	2
Bachelor's Degree	0
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(2.33)
Communications	(0.83)
Design/Measurement	(0.91)
Training	(1.33)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	1.13	3.33
Managers	3.38	3.80

MEETING FREQUENCY:

Daily	0
1 time per week	3
2 or more times per week	0
1 or 2 times per month	0

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- Provide logistic assistance to plant. Specifically, plant scheduling, shipping/receiving support, raw material ordering, packaging order, management

Members:
- To ensure availability of information and material resources to the operation and leadership teams
- To ensure production needs are met through scheduling, shipping, and raw materials to best use our facility
- My team is responsible for the efficient production of pet products from raw material ordering through of finished goods

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- Our culture here is clearly divided. The technicians are expected to act as "team members" but the leaders are expected to act as traditional "managers" due to the corporate culture they are members of a team is only as strong as its weakest link. Some members on our team are very strong - others are weaker and have less ambition, therefore bringing the whole team down

COMPANY E – TEAM 3 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.			
Cycle Time	3M	Quality	0
Quantity	2M	Cost Control	2
Customer Satisfaction	1M	Speed	0
List other performance measures used by your team:			
Manager: º Damage %. Shipping percentage/accuracy. Plant service level. Inventory accuracy			
Members: º Team Development. Shipping direct			

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?
YES 3 M NO 0
If yes, what are they?
Manager: º Inventory accuracy. damage costs. shipping savings
Members: º Budget limits º cost savings - cost per lb. cost savings - direct shipping º Cycle count adjustments

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF n/a

COMPANY E – TEAM 4 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Potential Team (3)
NUMBER OF SURVEYS:	6
AVERAGE MONTHS ON TEAM:	78

EDUCATION LEVEL:

High School	2
Some College	4
Bachelor's Degree	0
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.97)
Communications	(0.53)
Design/Measurement	(0.62)
Training	(0.56)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.02	3.40
Managers	3.88	3.60

MEETING FREQUENCY:

Daily	1
1 time per week	2
2 or more times per week	2
1 or 2 times per month	1

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- n/a

Members:
- To produce the highest quality of dog and cat food - be world class in pet industry
- To get quality pet foods sent on to the next step which is packaging
- To make a lot of pet food-bottom line-bean counters rule things no mater what
- To be an integral portion of the operations producing excellent
- To produce safe and quality lbs. for small pet nutrition

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- The main issues with our team are some people are more flexible that others toward getting the job done, and training in other areas
- All in all, most work together as a team - have a person who tries to run all of us which makes hard feelings toward other team members - otherwise team as a whole is good
- Our place of employment is supposed to have no seniority, but the people who have worked here the longest are very abusive and demanding to new team members. I'm surprised some of them haven't been in some sort of legal trouble over it
- My individual cell team is a good group that works together and covers each other, but other cells do this, it is easy to see
- In theory, it's a great concept. That's why I left my previous position. But, in the 6 years I've been in this environment, the "teamliness" has went downhill. WE used to have regular plant meetings twice a year - we no longer do. We used to do team-building exercises - we no longer do...I feel our plant used the moniker as a bragging point, but doesn't strive to reach what we claim we are...
- There seems to be very little inspiration
- True teamwork can set new production goals quite frequently as well as create non productive times. Teamwork needs a tremendous amount of information sharing

COMPANY E – TEAM 4 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	2	Quality	6
Quantity	6	Cost Control	4
Customer Satisfaction	5	Speed	6

List other performance measures used by your team:

Manager:
- n/a

Members:
- Asset utilization; flexibility; asset utilization; change over time, attendance. unscheduled downtime. preventative maintenance

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 3 NO 1

If yes, what are they?

Manager:
- n/a

Members:
- Whatever the higher-ups call them, it doesn't mater - still bottomline - numbers rule things
- Cost per lb. maint. budget

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF n/a

COMPANY E – TEAM 5 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Real; Team (4)
NUMBER OF SURVEYS:	10
AVERAGE MONTHS ON TEAM:	59.7

EDUCATION LEVEL:

High School	5
Some College	4
Bachelor's Degree	1
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(1.06)
Communications	(0.23)
Design/Measurement	(0.86)
Training	(0.53)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	3.94	3.64
Managers	3.50	3.80

MEETING FREQUENCY:

Daily	6
1 time per week	0
2 or more times per week	2
1 or 2 times per month	2

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- To produce high quality pet food

Members:
- The purpose of my team is to eliminate unscheduled downtime through maintenance and improvements
- To put out quality working together efficiently together
- To produce high quality product, in a safe and timely manner
- To convert raw materials into pet food
- To produce a high quality product and get it out on time
- To get the product out the door
- To make high quality pet food
- To put dog and cat food out the back door
- To get the job done together
- To blend better batches

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- Hill's has set a great foundation for teamwork. Aggressive management styles and lackluster team member motivation are large short comings that kill teamwork. Mediocre workers get the same rewards as high performers
- The company wants it to be self managing but they insist on managing their way without flexibility my team leader wants to be god

COMPANY E – TEAM 5 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.			
Cycle Time	6	Quality	9M
Quantity	9M	Cost Control	9M
Customer Satisfaction	8	Speed	7M
List other performance measures used by your team:			
Manager: º Sanitation. PM's. Efficiency			
Members: º Mechanical unscheduled downtime %. workorder completion; yield; asset utilization. safety. PSL			

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?
YES 10 NO 0 M
If yes, what are they?
Manager: º no comment
Members: º Cost savings; cost per pound

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF n/a

APPENDIX M

COMPANY 'F' SUMMARY
Sorted by Team Number

		Operational Measures[1,4]						Financial Measures[2]		Perceptual Measures			Support Systems
Team Number	Stage	Cycle Time	Quality	Quantity	Cost Control	Customer Satisfaction	Speed	Financial Measures	TEF	Team Potency	Perf (Team)	Perf (Mgr)	Average Gap
1	3	100% M	100%	100%	100%	90%	100%	100%		3.70	3.60	4.00	(0.52)
2	4	100% M	100% M	100% M	50% M	50% M	50% M	50%		4.44	3.90	4.20	(1.57)
3	3	29%	100% M	0%	57% M	71% M	14%	86%		4.23	3.57	3.40	(0.32)
4	3	90% M	100% M	90% M	80% M	90% M	70%	60%	7.5	3.98	3.58	3.20	(0.59)
5	3	67% M	100% M	83% M	17% M	67% M	50% M	17%	10.0	4.15	3.93	3.80	(0.52)
6	4	56%	89%	56%	67%	100%	44%	44%		4.42	4.09	-	(0.22)
7	4	100% M	100% M	100% M	75% M	75% M	100% M	50%	20.0	4.16	3.95	4.20	(0.42)
8	3	100% M	100% M	50%	83%	67%	17%	67%		3.74	3.30	3.40	(0.18)
9	5	100% M	100% M	25%	75%	100% M	75% M	75%		4.63	3.55	3.60	(0.53)
10	4	100%	100%	50%	50%	50%	50%	0%		4.31	3.40	3.80	(0.66)
11	5	100%	100%	0%	100%	100%	33%	100%		4.70	3.80	3.75	(0.19)
All Teams		81%	98%	60%	68%	81%	47%	65%		4.22	3.70	3.74	(0.52)
Perce Managers nt		64%	64%	36%	45%	54%	36%	54%					

[1]Operational Measures present the percent of team members selecting a specific measure.

[2]Financial Measure presents the percent of team members that say they have financial measures.

TEF is the calculated factor for the team -- not calculated for this company.

[3]Support Systems presents the average of the four gap measures (TRNGgap + REWgap + COMgap + DMgap)/4

[4]'M' designates measures the team manager selected.

COMPANY 'F' SUMMARY
Sorted by Team Potency

		Operational Measures[1]						Financial Measures[2]		Perceptual Measures			Support Systems
Team Number	Stage	Cycle Time	Quality	Quantity	Cost Control	Customer Satisfaction	Speed	Financial Measures	TEF	Team Potency	Perf (Team)	Perf (Mgr)	Average Gap
11	5	100%	100%	0%	100%	100%	33%	100%		4.70	3.80	3.75	(0.19)
9	5	100%	100%	25%	75%	100%	75%	75%		4.63	3.55	3.60	(0.53)
2	4	100%	100%	100%	50%	50%	50%	50%		4.44	3.90	4.20	(1.57)
6	4	56%	89%	56%	67%	100%	44%	44%		4.42	4.09	-	(0.22)
10	4	100%	100%	50%	50%	50%	50%	0%		4.31	3.40	3.80	(0.66)
3	3	29%	100%	0%	57%	71%	14%	86%		4.23	3.57	3.40	(0.32)
7	4	100%	100%	100%	75%	75%	100%	50%	20.0	4.16	3.95	4.20	(0.42)
5	3	67%	100%	83%	17%	67%	50%	17%	10.0	4.15	3.93	3.80	(0.52)
4	3	90%	100%	90%	80%	90%	70%	60%	7.5	3.98	3.58	3.20	(0.59)
8	3	100%	100%	50%	83%	67%	17%	67%		3.74	3.30	3.40	(0.18)
1	3	100%	100%	100%	100%	90%	100%	100%		3.70	3.60	4.00	(0.52)
All Teams[4]		81%	98%	60%	68%	81%	47%	65%		4.22	3.70	3.74	(0.52)

[1]Operational Measures present the percent of team members selecting a specific measure.

[2]Financial Measure presents the percent of team members that say they have financial measures.
TEF is the calculated factor for the team.

[3]Support Systems presents the average of the four gap measures (TRNGgap + REWgap + COMgap + DMgap)/4

COMPANY F – TEAM 1 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Pseudo Team (3)
NUMBER OF SURVEYS:	5
AVERAGE MONTHS ON TEAM:	78.6

EDUCATION LEVEL:

High School	2
Some College	3
Bachelor's Degree	0
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(1.34)
Communications	(0.34)
Design/Measurement	(0.32)
Training	(0.07)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	3.70	3.60
Managers	5.00	4.00

MEETING FREQUENCY:

Daily	0
1 time per week	5
2 or more times per week	0
1 or 2 times per month	0

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- no response

Members:
- To deliver high quality parts, and to make money
- Meeting requirements of company, customer, and contracts
- To ensure our organization operates smoothly
- ok
- Customer satisfaction, on time delivery
- To make an impact and contributions throughout product design and development and continue this support throughout production
- Team is well defined as to what our organization requires of our work effort. Our team is consistently rated as well above average

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- This team may disagree with one another, but when it comes down to it, getting the work out is always #1
- New team - great potential
- Teamwork is good

COMPANY F – TEAM 1 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.			
Cycle Time	5M	Quality	5
Quantity	5	Cost Control	5
Customer Satisfaction	4	Speed	5
List other performance measures used by your team:			
Manager: º dpmo. on time delivery			
Members: º On time-audits and other			

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?
YES 5 M NO 0
If yes, what are they?
Manager: º no response
Members: º Supervisor tracts º % availability % overhead º Cost avoidance. bookings

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF n/a

COMPANY F – TEAM 2 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Real Team (4)
NUMBER OF SURVEYS:	4
AVERAGE MONTHS ON TEAM:	30.5

EDUCATION LEVEL:

High School	0
Some College	4
Bachelor's Degree	0
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(2.40)
Communications	(1.41)
Design/Measurement	(1.14)
Training	(1.33)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.44	3.90
Managers	5.00	4.20

MEETING FREQUENCY:

Daily	0
1 time per week	4
2 or more times per week	0
1 or 2 times per month	0

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- Build external and internal deliverable antennas in support of production and internal development

Members:
- To be the preferred supplier of composite rasomes and antennas at low cost to customer and on-time deliveries
- To open and maintain communication between members
- The purpose of my team is to have customer satisfaction and quality exchange through employee teamwork
- Support production efforts across entire department and provide engineering support new designs a well
- To provide best in class technical for nonmetallic applications

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- A teams performance is mainly dependent on the proper fit f its members being open and honest

COMPANY F – TEAM 2 SNAPSHOT

PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.			
Cycle Time	4M	Quality	4M
Quantity	4M	Cost Control	2M
Customer Satisfaction	2M	Speed	2M
List other performance measures used by your team:			
Manager: º dpmo. Cross training			
Members: º Operational - starpoint execution. training. ?. knowledge-team capabilities º On time delivery			

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?
YES 2 M NO 2
If yes, what are they?
Manager: º Budget goals per product
Members: º Hours permit. overhead vs. direct (program) º Six sigma. Overhead; cycle time (labor saved); cost avoidance

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF n/a

COMPANY F – TEAM 3 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Potential Team (3)
NUMBER OF SURVEYS:	7
AVERAGE MONTHS ON TEAM:	11.6

EDUCATION LEVEL:

High School	1
Some College	2
Bachelor's Degree	3
Advanced Degree	1
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.48)
Communications	0
Design/Measurement	(0.19)
Training	(0.62)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.23	3.57
Managers	4.38	3.40

MEETING FREQUENCY:

Daily	0
1 time per week	9
2 or more times per week	0
1 or 2 times per month	0

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- Support the antenna/nonmetals product center with quality type functions

Members:
- To get the work done
- High quality performance and working together
- Provide process design and support and materials analysis and selection
- To provide quality plastic and rubber support

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- We are a team and support one another

COMPANY F – TEAM 3 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	2	Quality	7M
Quantity	0	Cost Control	4M
Customer Satisfaction	5M	Speed	1

List other performance measures used by your team:

Manager:
- # of completed milestones. opm

Members:
- Cross training

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 6 M NO 0

If yes, what are they?

Manager:
- Overhead cost

Members:
- Overhead
- All
- Cost savings
- Cost avoidance. cost savings. bookings

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF n/a

COMPANY F – TEAM 4 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Potential Team (3)
NUMBER OF SURVEYS:	10
AVERAGE MONTHS ON TEAM:	10.6

EDUCATION LEVEL:

High School	3
Some College	6
Bachelor's Degree	1
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(1.18)
Communications	(0.42)
Design/Measurement	(0.27)
Training	(0.50)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	3.98	3.58
Managers	3.50	3.20

MEETING FREQUENCY:

Daily	1
1 time per week	0
2 or more times per week	0
1 or 2 times per month	0

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- Fabricate javelin composite parts for government program

Members:
- To ensure quality parts go to the customers
- Build javelin parts for the government at a low cost
- Support the production floor and the manufacturing teams
- Produce high volume microwave materials

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- no responses

COMPANY F – TEAM 4 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	9M	Quality	10M
Quantity	9M	Cost Control	8M
Customer Satisfaction	9M	Speed	7

List other performance measures used by your team:

Manager:

- Defects per million opportunity. moral of the team

Members:

- SPC. customer feedback
- Customer feedback
- dpmo

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 6 M NO 3

If yes, what are they?

Manager:

- Part type average cost/change in process (its cost) v.s. savings per part* qtu analysis of a set of experiments v.s. cost in current scrap rate

Members:

- Overhead tracking
- Cost savings

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF n/a

COMPANY F – TEAM 5 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Potential Team (3)
NUMBER OF SURVEYS:	6
AVERAGE MONTHS ON TEAM:	15.3

EDUCATION LEVEL:

High School	0
Some College	6
Bachelor's Degree	0
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.94)
Communications	(0.31)
Design/Measurement	(0.43)
Training	(0.39)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.15	3.93
Managers	4.75	3.80

MEETING FREQUENCY:

Daily	0
1 time per week	0
2 or more times per week	0
1 or 2 times per month	6

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- Non-metallic/composite paint and finish shop. Usually the last step of manufacturing for the antenna/nonmetallic defense manufacturing division

Members:
- The purpose of our team is to promote customer satisfaction through quality performance and teamwork

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- no responses

COMPANY F – TEAM 5 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	4M	Quality	6M
Quantity	5M	Cost Control	1M
Customer Satisfaction	4M	Speed	3M

List other performance measures used by your team:

Manager:
- Safety

Members:
- Team training metrics. OPM. QE audit metrics

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 1 M NO 4

If yes, what are they?

Manager:
- Hours per unit. support/fabrication time ratios

Members:
- Part type average cost/change in process (its cost) v.s. savings per part* qtu analysis of a set of experiments

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF

10.0

COMPANY F – TEAM 6 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Real Team (4)
NUMBER OF SURVEYS:	9
AVERAGE MONTHS ON TEAM:	52.8

EDUCATION LEVEL:

High School	2
Some College	7
Bachelor's Degree	0
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.60)
Communications	0
Design/Measurement	(0.26)
Training	0

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.42	4.09
Managers	---	---

MEETING FREQUENCY:

Daily	0
1 time per week	5
2 or more times per week	0
1 or 2 times per month	4

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- No response

Members:
- Provide support
- To be the best number 1 builder of defense products
- To do our job best of our abilities
- To provide manufacturing support for the antenna department

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- No responses

COMPANY F – TEAM 6 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.			
Cycle Time	5	Quality	8
Quantity	5	Cost Control	6
Customer Satisfaction	9	Speed	4
List other performance measures used by your team:			
Manager: º No response			
Members: º Statistical analysis. process control º Quality. time. quantity			

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?
YES 4 NO 5
If yes, what are they?
Manager: º Cycle time reduction. dpmo reduction. on time delivery
Members: º Hours per unit=cost of part º Cost savings

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF n/a

COMPANY F – TEAM 7 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Real Team (4)
NUMBER OF SURVEYS:	4
AVERAGE MONTHS ON TEAM:	43.5

EDUCATION LEVEL:

High School	3
Some College	0
Bachelor's Degree	1
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.10)
Communications	(0.38)
Design/Measurement	(0.11)
Training	(0.09)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.16	3.95
Managers	3.75	4.20

MEETING FREQUENCY:

Daily	0
1 time per week	0
2 or more times per week	1
1 or 2 times per month	3

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- To provide best in class technical support for nonmetallic application within rsc

Members:
- Provide quality support, a resource for department
- To produce high quality parts per scheduling requirements
- Work as a team to satisfy customers in a positive and effective method

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- No responses

COMPANY F – TEAM 7 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	4M	Quality	4M
Quantity	3M	Cost Control	3M
Customer Satisfaction	4M	Speed	0M

List other performance measures used by your team:

Manager:

- On time delivery. quoting win/cost %

Members:

- Teamwork
- On time delivery. DPMO

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 2 M NO 1

If yes, what are they?

Manager:

- Cost savings. cost avoidance. bookings

Members:

- cost savings

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF 20.0

COMPANY F – TEAM 8 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Potential Team (3)
NUMBER OF SURVEYS:	6
AVERAGE MONTHS ON TEAM:	43.7

EDUCATION LEVEL:

High School	6
Some College	0
Bachelor's Degree	0
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.48)
Communications	(0.08)
Design/Measurement	0
Training	(0.17)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	3.74	3.30
Managers	4.13	3.40

MEETING FREQUENCY:

Daily	4
1 time per week	0
2 or more times per week	0
1 or 2 times per month	2

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- n/a

Members:
- We build composite materials for a variety of projects that support about 60% of this sites budget
- Help manf. eng. in anyway needed to help our organization be successful

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- I used to be in the military for 6 and a half years and I feel this organization has a lot to learn about teamwork

COMPANY F – TEAM 8 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	6M	Quality	6M
Quantity	3	Cost Control	5
Customer Satisfaction	4	Speed	1

List other performance measures used by your team:

Manager:
- n/a

Members:
- Performance metrics. productability metrics. individual metrics.

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 4 NO 1 M

If yes, what are they?

Manager:
- n/a

Members:
- cost savings. scrap rates

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF n/a

COMPANY F – TEAM 9 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	High Perf Team (5)
NUMBER OF SURVEYS:	4
AVERAGE MONTHS ON TEAM:	64

EDUCATION LEVEL:

High School	0
Some College	1
Bachelor's Degree	2
Advanced Degree	1
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.95)
Communications	(0.50)
Design/Measurement	(0.57)
Training	(0.08)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.63	3.55
Managers	4.75	3.60

MEETING FREQUENCY:

Daily	0
1 time per week	1
2 or more times per week	0
1 or 2 times per month	3

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- Provide microwave materials to other sections of company

Members:
- Make products in a timely manner, cost efficient manner

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- No response

COMPANY F – TEAM 9 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	4M	Quality	4M
Quantity	1	Cost Control	3
Customer Satisfaction	4M	Speed	3M

List other performance measures used by your team:

Manager:
- dpmo. safety. unit hr

Members:
- No response

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 3 NO 1 M

If yes, what are they?

Manager:
- unit hr

Members:
- Cost savings. on time delivery

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF n/a

COMPANY F – TEAM 10 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Real Team (4)
NUMBER OF SURVEYS:	4
AVERAGE MONTHS ON TEAM:	9

EDUCATION LEVEL:

High School	0
Some College	4
Bachelor's Degree	0
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(1.30)
Communications	(0.50)
Design/Measurement	(0.50)
Training	(0.34)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.31	3.40
Managers	4.75	3.80

MEETING FREQUENCY:

Daily	0
1 time per week	4
2 or more times per week	0
1 or 2 times per month	0

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- No response

Members:
- Output

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- Teamwork is defined as a unit or a unity of individuals sharing a common commitment or purpose to accomplish a common goal

COMPANY F – TEAM 10 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	4	Quality	4
Quantity	2	Cost Control	2
Customer Satisfaction	2	Speed	2

List other performance measures used by your team:

Manager:
- Safety

Members:
- No response

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 0 NO 2

If yes, what are they?

Manager:
- No response

Members:
- HPU. CT

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF n/a

COMPANY F – TEAM 11 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	High Perf Team (5)
NUMBER OF SURVEYS:	3
AVERAGE MONTHS ON TEAM:	92

EDUCATION LEVEL:

High School	0
Some College	0
Bachelor's Degree	2
Advanced Degree	1
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.60)
Communications	(0.17)
Design/Measurement	0
Training	0

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.70	3.80
Managers	4.13	3.75

MEETING FREQUENCY:

Daily	0
1 time per week	0
2 or more times per week	0
1 or 2 times per month	3

QUESTION: How would you describe the purpose/mission of your team?

Manager:
- Provide materials and process support to programs

Members:
- No responses

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

- No responses

COMPANY F – TEAM 11 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	3	Quality	3
Quantity	0	Cost Control	3
Customer Satisfaction	3	Speed	1

List other performance measures used by your team:

Manager:
- Accurate documentation

Members:
- No response

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 3 NO 0

If yes, what are they?

Manager:
- No response

Members:
- No response

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF n/a

APPENDIX N

COMPANY 'G' SUMMARY
Sorted by Team Number

		Operational Measures[1]						Financial Measures[2]		Perceptual Measures			Support Systems
Team Number	Stage	Cycle Time	Quality	Quantity	Cost Control	Customer Satisfaction	Speed	Financial Measures	TEF	Team Potency	Perf (Team)	Perf (Mgr)	Average Gap
1	1	14%	57%	14%	50%	43%	14%	21%	-	3.57	3.09	3.60	(0.78)
2	3	20%	80% M	60%	100% M	100%	40%	100% M	10.0	4.25	3.96	4.00	(0.29)
3	3	25%	75%	75%	100%	50%	0%	100%	-	3.35	3.84	-	(0.58)
4	1	25%	75%	0%	50%	50%	0%	50%	-	3.81	3.25	3.60	(0.14)
5	3	13%	100%	63%	13%	88%	25%	50%	10.0	4.22	3.60	3.60	(0.42)
6	2	33%	78%	11%	56%	100%	22%	100%	-	3.73	3.38	4.00	(0.09)
7	3	0% M	83% M	0%	17%	67%	17%	17%	-	3.97	3.20	4.20	(0.48)
8	3	14%	86%	71% M	71% M	100%	14%	57% M	-	3.87	3.70	3.80	(0.28)
9	2	18%	82%	36%	73%	55%	36%	45%	-	3.45	3.42	3.40	(0.53)
10	3	9%	0%	9% M	45% M	55%	27%	18% M	-	3.81	3.58	3.40	(0.69)
11	2	10%	80%	70%	80%	60%	50%	50%	-	3.60	3.42	4.00	(0.68)
All Teams		16%	78%	39%	57%	67%	25%	49%		3.78	3.49	3.76	(0.45)
Percent Managers		9%	18%	18%	17%	0%	0%	17%					

[1]Operational Measures present the percent of team members selecting a specific measure.

[2]Financial Measure presents the percent of team members that say they have financial measures.
TEF is the calculated factor for the team.

[3]Support Systems presents the average of the four gap measures (TRNGgap + REWgap + COMgap + DMgap)/4

[4]'M' designates measures the team manager selected.

COMPANY 'G' SUMMARY
Sorted by Team Potency

		Operational Measures[1]						Financial Measures[2]		Perceptual Measures			Support Systems
Team Number	Stage	Cycle Time	Quality	Quantity	Cost Control	Customer Satisfaction	Speed	Financial Measures	TEF	Team Potency	Perf (Team)	Perf (Mgr)	Average Gap
2	3	20%	80%	60%	100%	100%	40%	100%	10.0	4.25	3.96	4.00	(0.29)
5	3	13%	100%	63%	13%	88%	25%	50%	10.0	4.22	3.60	3.60	(0.42)
7	3	0%	83%	0%	17%	67%	17%	17%	-	3.97	3.20	4.20	(0.48)
8	3	14%	86%	71%	71%	100%	14%	57%	-	3.87	3.70	3.80	(0.28)
4	1	25%	75%	0%	50%	50%	0%	50%	-	3.81	3.25	3.60	(0.14)
10	3	9%	0%	9%	45%	55%	27%	18%	-	3.81	3.58	3.40	(0.69)
6	2	33%	78%	11%	56%	100%	22%	100%	-	3.73	3.38	4.00	(0.09)
11	2	10%	80%	70%	80%	60%	50%	50%	-	3.60	3.42	4.00	(0.68)
1	1	14%	57%	14%	50%	43%	14%	21%	-	3.57	3.09	3.60	(0.78)
9	2	18%	82%	36%	73%	55%	36%	45%	-	3.45	3.42	3.40	(0.53)
3	3	25%	75%	75%	100%	50%	0%	100%	-	3.35	3.84	-	(0.58)
All Teams[4]		16%	78%	39%	57%	67%	25%	49%					

[1]Operational Measures present the percent of team members selecting a specific measure.

[2]Financial Measure presents the percent of team members that say they have financial measures.

TEF is the calculated factor for the team.

[3]Support Systems presents the average of the four gap measures (TRNGgap + REWgap + COMgap + DMgap)/4

COMPANY G – TEAM 1 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	2	Quality	8
Quantity	2	Cost Control	7
Customer Satisfaction	6	Speed	2

List other performance measures used by your team:

Manager:

* Measurements are not in place other than cost
* Completion in timely manner; consistency
* Attitudes; work relations; performance

Members:

* No response

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 3 NO 0M

If yes, what are they?

Manager:

* Not sure

Members:

* No response

TEAM EFFECTIVENESS FACTOR (TEF): 0.0

Benefits / Cost = TEF

COMPANY G – TEAM 2 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Parallel Team
STAGE:	Potential Team (3)
NUMBER OF SURVEYS:	5
AVERAGE MONTHS ON TEAM:	14.0

EDUCATION LEVEL:

High School	2
Some College	0
Bachelor's Degree	3
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.43)
Communications	(0.33)
Design/Measurement	(0.40)
Training	0

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.25	3.96
Managers	5.00	4.00

MEETING FREQUENCY:

Daily	0
1 time per week	5
2 or more times per week	0
1 or 2 times per month	0

QUESTION: How would you describe the purpose/mission of your team?

Manager:

* To improve gasoline blending economics, provide customer satisfaction while meeting all regulatory requirements, foster cooperation and understanding of gasoline issues between departments, and provide a forum for development of gasoline blending improvement ideas.

Members:

* Blending gasoline optimizing best blending components
* Reduce monetary giveaway through improved gasoline blending
* The gasoline blend team blends gasoline using optimum blending components in an economical manner
* Maximizing the profits of blending gasoline
* To be a major part of my team

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

* I think it is the only way to get things accomplished

COMPANY G – TEAM 2 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	1	Quality	4M
Quantity	3	Cost Control	5M
Customer Satisfaction	5	Speed	2

List other performance measures used by your team:

Manager:

* Safety
* Environment

Members:

* No response

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 5M NO 0

If yes, what are they?

Manager:

* Cost savings = money per barrel
* Cost of octaine. Cost of rvp
* Cost savings. Increased revenue (use of low value products)
* Cost savings. Increased revenue

Members:

* No response

TEAM EFFECTIVENESS FACTOR (TEF): maximum 20.0

Benefits / Cost = TEF

COMPANY G – TEAM 3 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Potential Team (3)
NUMBER OF SURVEYS:	4
AVERAGE MONTHS ON TEAM:	37.25

EDUCATION LEVEL:

High School	0
Some College	0
Bachelor's Degree	3
Advanced Degree	1
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(1.20)
Communications	(0.75)
Design/Measurement	(0.36)
Training	0

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	3.35	3.84
Managers	-	-

MEETING FREQUENCY:

Daily	0
1 time per week	4
2 or more times per week	0
1 or 2 times per month	0

QUESTION: How would you describe the purpose/mission of your team?

Manager:
* N/A

Members:
* Provide leadership for the plant by setting a proper example and helping others to succeed
* To lead and direct the plant operation. To set strategy, goals and objectives for the site and provide resources to achieve those
* To provide overview and guidance to enable the site to achieve its objectives

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

* Leadership team seems to function quite well. All members seem to "click" very well.
* This team struggles. Most work appears individualized or sub team. Lack of collective recognition is fundamental concern
* Teamwork is 'hard' . . . In many cases the principles of teaming run counter to what we are taught and rewarded for earlier in life. Example: when was the last time a team was awarded a scholarship to college!

COMPANY G – TEAM 3 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	1	Quality	3
Quantity	3	Cost Control	2
Customer Satisfaction	2	Speed	4

List other performance measures used by your team:

Manager:

* Scorecard

Members:

* No response

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 4 NO 0

If yes, what are they?

Manager:

* Meeting budget (cost control)
* Fixed cost. Chop
* Capital and exp. budgets
* Cost of heavy olefin feed production (chop). Amount of high value products produced

Members:

* No response

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF n/a

COMPANY G – TEAM 4 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Working Group (1)
NUMBER OF SURVEYS:	4
AVERAGE MONTHS ON TEAM:	5.5

EDUCATION LEVEL:

High School	0
Some College	2
Bachelor's Degree	1
Advanced Degree	1
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.30)
Communications	0
Design/Measurement	(0.25)
Training	0

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	3.81	3.25
Managers	4.50	3.60

MEETING FREQUENCY:

Daily	0
1 time per week	0
2 or more times per week	4
1 or 2 times per month	0

QUESTION: How would you describe the purpose/mission of your team?

Manager:
* No formal mission statement has been developed to date

Members:
* To provide guidance in the area of hs&e
* To have all regulated compliance programs and corporate policy/programs organized and planned
* To establish hs&e goals, to mentor to all plant employees the significance of hs&e practices, and to assure all applicable hs&e laws and regulations are adhered to at this facility

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

* We are in the initial phase of teams, but the groups are energetic

COMPANY G – TEAM 4 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	1	Quality	3
Quantity	0	Cost Control	2
Customer Satisfaction	2	Speed	4

List other performance measures used by your team:

Manager:
* No response

Members:
* hs&e incidents
* Results from audits
* How well hs&e audits are rated

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 2 NO 2 M

If yes, what are they?

Manager:
* No response

Members:
* Environmental cost savings

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF 0.0

COMPANY G – TEAM 5 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Potential Team (3)
NUMBER OF SURVEYS:	5
AVERAGE MONTHS ON TEAM:	10.5

EDUCATION LEVEL:

High School	1
Some College	2
Bachelor's Degree	4
Advanced Degree	0
Other	1

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.73)
Communications	(0.36)
Design/Measurement	(0.57)
Training	0

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	4.22	3.60
Managers	4.25	3.60

MEETING FREQUENCY:

Daily	0
1 time per week	8
2 or more times per week	0
1 or 2 times per month	0

QUESTION: How would you describe the purpose/mission of your team?

Manager:
* To provide timely and accurate quality assurance services

Members:
* To provide accurate, high quality data to operations in a safe and environmentally friendly way
* A high demand for quality, precision and interaction with customers (internal and external)
* To meet/exceed customer's needs by providing accurate and timely data and emphasis on exceeding health, safety, and environmental concerns
* Provide accurate data to our customers
* To provide accurate reliable data to our customers

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

* This team formed about one year ago. They have learned to manage their time scheduling, hiring process, and new employee training process within the team - no supervisor involvement
* We have made much progress as a team as a result of problem solving and discussion in team meeting. Training on communication, etc. may eventually be helpful. We have a few team members that really don't contribute as much as they should, but no one is forced

COMPANY G – TEAM 5 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	1	Quality	8M
Quantity	5	Cost Control	1
Customer Satisfaction	7	Speed	2

List other performance measures used by your team:

Manager:
* No response

Members:
* Precision

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 4 NO 4 M

If yes, what are they?

Manager:
* No response

Members:
* Blending stocks and products
* Recycle
* Power conservation
* Cost savings

TEAM EFFECTIVENESS FACTOR (TEF): 20.0

Benefits / Cost = TEF

Project 1 Benefits = $33,600 Cost = 0
Project 2 Benefits = $36,000 Cost = 0

COMPANY G – TEAM 6 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Pseudo Team (2)
NUMBER OF SURVEYS:	9
AVERAGE MONTHS ON TEAM:	10.6

EDUCATION LEVEL:

High School	3
Some College	2
Bachelor's Degree	3
Advanced Degree	1
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.09)
Communications	(0.12)
Design/Measurement	(0.07)
Training	(0.06)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	3.73	3.38
Managers	4.50	4.00

MEETING FREQUENCY:

Daily	0
1 time per week	0
2 or more times per week	0
1 or 2 times per month	6

QUESTION: How would you describe the purpose/mission of your team?

Manager:
* No response

Members:
* To provide low cost business services (finance and purchasing)
* Improve the bus. svs processes
* To achieve a high volume of quality work
* The business services team is there to offer precise accountability in regards to funds, value, and technical assets
* To provide information in a timely manner as accurately as humanly possible
* To accomplish our jobs more efficiently and professionally

Rater: Good (poor) sense of purpose: Good
Level of agreement with manager (high/low) : n/a

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

* No responses

COMPANY G – TEAM 6 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	3	Quality	7
Quantity	1	Cost Control	5
Customer Satisfaction	9	Speed	2

List other performance measures used by your team:

Manager:

* No response

Members:

* Boss is happy
* Accuracy. commitment

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 9 NO 0 M

If yes, what are they?

Manager:

* No response

Members:

* Cost savings (procurement) ex. dollars saved with ftz
* Cost savings
* Cost savings. increased revenue
* Purchase i.e. more for the money. cost savings-production of cost in doing bus. freight cost

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF

0.0

COMPANY G – TEAM 7 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Potential Team (3)
NUMBER OF SURVEYS:	6
AVERAGE MONTHS ON TEAM:	17.7

EDUCATION LEVEL:

High School	2
Some College	3
Bachelor's Degree	1
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.93)
Communications	(0.19)
Design/Measurement	(0.81)
Training	0

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	3.97	3.20
Managers	4.38	4.20

MEETING FREQUENCY:

Daily	1
1 time per week	5
2 or more times per week	0
1 or 2 times per month	0

QUESTION: How would you describe the purpose/mission of your team?

Manager:

* The team provides technical/trouble-shooting supports to the day-to-day operations of the refinery. They develop and execute the operations plan, provide operating guidelines and work to optimize the various chemical processes

Members:

* To assist the mobile site operation's dept. in producing high value products
* Give guiding and support to shift teams
* Optimize high value product production
* To provide high impact tech support
* Plan and organize refining units to maximize high value products
* maximize production of high value products

Rater: Good (poor) sense of purpose: Good
Level of agreement with manager (high/low): High

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

* I see it as necessary and the right thing to do in any work environment

COMPANY G – TEAM 7 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	0M	Quality	5M
Quantity	0	Cost Control	1
Customer Satisfaction	4	Speed	1

List other performance measures used by your team:

Manager:

* No response

Members:

* Unit performance. environmental events. safety events
* High value products

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 1 NO 5 M

If yes, what are they?

Manager:

* No response

Members:

* Return on investment (ROI)

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF

0.0

COMPANY G – TEAM 8 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Potential Team (3)
NUMBER OF SURVEYS:	8
AVERAGE MONTHS ON TEAM:	28

EDUCATION LEVEL:

High School	4
Some College	2
Bachelor's Degree	0
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.61)
Communications	(0.33)
Design/Measurement	(0.04)
Training	(0.14)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	3.87	3.70
Managers	4.25	3.80

MEETING FREQUENCY:

Daily	2
1 time per week	1
2 or more times per week	0
1 or 2 times per month	4

QUESTION: How would you describe the purpose/mission of your team?

Manager:
* No comment

Members:
* To try work together better and maybe solve problems a little easier
* To do a job to our best ability
* To be the best we can be
* Hard working, high quality work, productive and safe working
* Safety is most important
* To work well with other as a team to make sellable products to out customers
* Working together team work

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

* I believe having a team makes each member feel like they have a part in everything that is going on
* More help

COMPANY G – TEAM 7 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	1	Quality	6
Quantity	5M	Cost Control	5M
Customer Satisfaction	7	Speed	11

List other performance measures used by your team:

Manager:

* No response

Members:

* Safety. helping each other. productive
* Safety. environmental
* Self satisfaction
* Safety first. safety of people

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 4 M NO 3

If yes, what are they?

Manager:

* No response

Members:

* Try to keep products on spec. minimize rr products
* Keeping value prod. sep. ding things in advance to help other teams
* Down time. lost time. product spec. over or under
* Keep cost down

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF

0.0

COMPANY G – TEAM 9 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Pseudo Team (2)
NUMBER OF SURVEYS:	11
AVERAGE MONTHS ON TEAM:	10.75

EDUCATION LEVEL:

High School	3
Some College	5
Bachelor's Degree	3
Advanced Degree	0
Other	0

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(0.65)
Communications	(0.27)
Design/Measurement	(0.51)
Training	(0.68)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	3.45	3.42
Managers	3.50	3.40

MEETING FREQUENCY:

Daily	1
1 time per week	1
2 or more times per week	9
1 or 2 times per month	0

QUESTION: How would you describe the purpose/mission of your team?

Manager:

* The ___ production team operates, monitors, and manages the production units, tank farm, terminals, and related facilities at mobile site to maximize the availability high-value products in a safe, efficient, and environmentally sound manner while always look for ways to improve chop.

Members:

* To be the best for less
* Work together safely and productively
* Make a profit
* To produce and deliver a quality product in an environmentally friendly way
* To produce high quality products in a safe and timely manner
* We uphold our mission statement and govern ourselves by it
* I haven't been part of a team long enough to describe their mission at this point

Rater: Good (poor) sense of purpose: Good
Level of agreement with manager (high/low): High

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

* The team building and implementation process needs to be sped up
* There are very few, if any, goals or rewards

COMPANY G – TEAM 9 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	2	Quality	9
Quantity	4	Cost Control	8
Customer Satisfaction	6	Speed	4

List other performance measures used by your team:

Manager:

* No response

Members:

* Safety. environment
* Safety. environmental

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 5 NO 6 M

If yes, what are they?

Manager:

* No response

Members:

* Chop
* Minimum wage
* Less manpower - more efficient production
* Cost savings. quality control

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF

0.0

COMPANY G – TEAM 10 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Potential Team (3)
NUMBER OF SURVEYS:	11
AVERAGE MONTHS ON TEAM:	10.5

EDUCATION LEVEL:

High School	4
Some College	4
Bachelor's Degree	2
Advanced Degree	0
Other	1

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(1.07)
Communications	(0.69)
Design/Measurement	(0.49)
Training	(0.49)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	3.81	3.58
Managers	4.38	3.40

MEETING FREQUENCY:

Daily	1
1 time per week	0
2 or more times per week	1
1 or 2 times per month	9

QUESTION: How would you describe the purpose/mission of your team?

Manager:

* No response

Members:

* Refining crude oil, safely, efficiently and providing supports for external and internal customers
* An organization that communicated, participates in each others duties to make our team productive
* Work safe and make money
* My teams mission is to produce a high quality product at the lowest possible cost to the company while keeping safety and environmental issues at the top of everything we do
* Make twelve hours and work safe
* High quality work team of performing our work tasks
* Quality product with less people
* To get people to work together, and get along

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

* We still have a long way to go. People here as other places are resistant to change
* The team concept is catching on but a few individuals are carrying the load for people ;who will not get board

COMPANY G – TEAM 10 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	1	Quality	0
Quantity	1M	Cost Control	5M
Customer Satisfaction	6	Speed	3

List other performance measures used by your team:

Manager:
* No response

Members:
* No response

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 2 M NO 9

If yes, what are they?

Manager:
* No response

Members:
* No response

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF

0.0

COMPANY G – TEAM 11 SNAPSHOT
PART 1

DESCRIPTIVE INFORMATION:

TYPE:	Work Team
STAGE:	Pseudo Team (2)
NUMBER OF SURVEYS:	10
AVERAGE MONTHS ON TEAM:	9.6

EDUCATION LEVEL:

High School	5
Some College	4
Bachelor's Degree	0
Advanced Degree	0
Other	1

SUPPORT SYSTEM DEFFICIENCY:

Rewards	(1.13)
Communications	(0.54)
Design/Measurement	(0.44)
Training	(0.60)

PERCEPTIONS OF PERFORMANCE:

	Potency	Perf
Members	3.60	3.42
Managers	4.50	4.00

MEETING FREQUENCY:

Daily	0
1 time per week	0
2 or more times per week	0
1 or 2 times per month	10

QUESTION: How would you describe the purpose/mission of your team?

Manager:

* The ____ product team produces, stores, blends and ships refined product at mobile site in a safe, efficient, and cost effective manner while providing innovative ideas which help to insure ____world-class performance in lower olefins

Members:

* Good
* Plain and simple - to the point
* It fits the job we do
* Work safe, understand our jobs and ourselves, communicate better, make money for the company, and so on
* Good
* Be safe and highly productive under all circumstances
* Do the best it can do
* Efficient
* Good
* To get the job done

QUESTION: In the space below, please share any additional comments you would like to make regarding teamwork.

* I'm having trouble seeing where the team starts. We (I) feel we were just as efficient before it all began
* Team concept is not a new science, it has been around forever

COMPANY G – TEAM 11 SNAPSHOT
PART 2

OPERATIONAL MEASURES:

Circle general categories of measurements used to gauge your team's performance. Circle as many as appropriate.

Cycle Time	1	Quality	8
Quantity	7	Cost Control	8
Customer Satisfaction	6	Speed	5

List other performance measures used by your team:

Manager:

* No response

Members:

* Cost savings. safety. environmental
* Gas blending

FINANCIAL MEASURES:

Do any of your team's performance measures involve financial metrics?

YES 5 NO 5 M

If yes, what are they?

Manager:

* No response

Members:

* No comment

TEAM EFFECTIVENESS FACTOR (TEF):

Benefits / Cost = TEF

0.0

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